Initial Study/Negative Declaration of the 10145 Artesia Place Office/Warehouse Development, Bellflower, CA

Prepared For:

City of Bellflower
16600 Civic Center Drive
Bellflower, CA 90706

Project Developer:

SIDESTUDIO

16612 Grand Avenue
Bellflower, CA 90706

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January 2025

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List of Acronyms and Abbreviations

AAQS	Ambient Air Quality Standards
AB	Assembly Bill
APN	Assessor's Parcel Number
AQMP	Air Quality Management Plan
Basin Plan	Los Angeles Region Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties
BMC	Bellflower Municipal Code
BMP	Best Management Practice
BSMWC	Bellflower Somerset Mutual Water Company
CA	California
CAAQS	California Ambient Air Quality Standards
Cal/OSHA	California Division of Occupational Safety and Health
CalEEMod	California Emissions Estimator Model®
CalEPA	California Environmental Protection Agency
CAL FIRE	California Department of Forestry and Fire Protection
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CARB	California Air Resources Board
CBC	California Building Standards Code
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CDOC	California Department of Conservation
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CH_4	Methane
City	City of Bellflower, CA
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent
CRMP	Cultural Resource Management Plan
dB	Decibel
dBA	A-Weighted Decibel
DPM	Diesel Particulate Matter
DTSC	[California] Department of Toxic Substances Control
DR	Development Review
DWR	Department of Water Resources
EIR	Environmental Impact Report

EMS	Emergency Medical Services
Farmland	Prime Farmland, Unique Farmland, or Farmland of Statewide Importance
FEMA	Federal Emergency Management Agency
GHG	Greenhouse Gas
GSA	Groundwater Sustainability Agency
GWP	Global Warming Potential
HCP	Habitat Conservation Plan
HVAC	Heating, Ventilation, and Air Conditioning
IS	Initial Study
LACSD	Los Angeles County Sanitation District
lbs	pounds
L_{dn}	Day-Night Average Noise Level
L_{eq}	Equivalent Continuous Sound Pressure Level
L_{max}	Maximum L_{eq}
L_{min}	Minimum L_{eq}
LRA	Local Responsibility Area
LARWQCB	Los Angeles Regional Water Quality Control Board
LST	Localized Significance Threshold
MEI	Maximally Exposed Individual
MS4	Municipal Separate Storm Sewer System
MT	Metric Ton
N_2O	Nitrous Oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCCP	Natural Community Conservation Plan
ND	Negative Declaration
NO_2	Nitrogen Dioxide
NO_x	Oxides of Nitrogen
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
O_3	Ozone
OEHHA	[California] Office of Environmental Health Hazard Assessment
P	Project Feature
PM_{10}	Respirable Particulate Matter
$PM_{2.5}$	Fine Particulate Matter
PRC	[California] Public Resources Code
R	Refrigerants
ROG	Reactive Organic Gases
RTP	Regional Transportation Plan
SB	Senate Bill

SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCE	Southern California Edison
SGMA	Sustainable Groundwater Management Act
SCS	Sustainable Communities Strategy
SO_2	Sulfur Dioxide
SoCalGas	Southern California Gas Company
SO_x	Oxides of Sulfur
SRA	Source-Receptor Area
State	California
SWRCB	State Water Resources Control Board
TAC	Toxic Air Contaminant
TCR	Tribal Cultural Resource
U.S. EPA	United States Environmental Protection Agency
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compounds
WRD	Water Replenishment District of Southern California

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1.0 INTRODUCTION

1.1 Project Information

Side Studio, Inc. (the "Applicant")[1] is proposing to develop new offices and storage warehouse buildings located at 10145 Artesia Place, Belflower CA 90706 (APN 7161-005-025). Information regarding the proposed development is summarized in Table 1-1.

Table 1-1: Project Information and Contact Information

1.	**Project Title**	10145 Artesia Place Office/Warehouse Development Review Case No. DR-7-23-14488 and Variance Case No. V 23-01
2.	**Lead Agency Name and Address**	City of Bellflower 16600 Civic Center Drive Bellflower, CA 90706
3.	**Lead Agency Contact**	Rowena Genilo-Concepcion Planning Manager City of Bellflower Planning Division (562) 804-1424 ext. 2228 RGenilo@Bellflower.org
4.	**Project Location**	10145 Artesia Place, Bellflower, CA
5.	**Applicant's Contact Information**	Side Studio, Inc. Tobin White 16612 Grand Avenue Bellflower, CA 90706 (917) 301-8776 Tobin@SideStudio.com
6.	**Property Owner and Future Tenant**	Bellflower Somerset Mutual Water Company Steve Lenton 10016 Flower Street Bellflower, CA 90706 (562) 866-9980 SLenton@BSMWC.com
7.	**General Plan Designation(s)**	Industrial
8.	**Zoning Designation**	M-1 Light Industrial

1.2 Purpose of the Initial Study

This Initial Study ("IS")/Negative Declaration ("ND") is prepared in accordance with the provisions of the California Environmental Quality Act as set forth in the California Public Resources Code ("PRC") sections 21000, et. seq. ("CEQA"), and the California Code of

[1] Authorized Agent: Tobin White

Regulations 15000 et. seq ("CEQA Guidelines"). In accordance with CEQA Guidelines section 15002(a), the basic purposes of CEQA are to inform public agency decisionmakers and the general public of the significant environmental effects of a project, identify possible ways to minimize the significant effects through the use of mitigation measures or alternatives to the project, and disclose to the public the reasons why a government agency could approve the project if significant environmental effects are involved.

An IS for a project subject to CEQA is prepared to analyze the potential for significant impacts on the environment. (CEQA Guidelines section 15063(a)). This IS provides an analysis of the proposed development, its potential impacts on the environment, and informs the City of Bellflower ("City") decisionmakers, affected agencies, and the public of potentially significant environmental impacts associated with the implementation of the development, as defined in CEQA Guidelines section 15382. As such, this document's intent is to adhere to the following CEQA principles:

- Provide meaningful early evaluation of site planning constraints, service, and infrastructure requirements, as well as other local and regional environmental considerations (PRC section 21003.1);
- Encourage the applicant to incorporate environmental considerations into the Project conceptualization, design, and planning at the earliest feasible time (CEQA Guidelines section 15004[b][3]); and
- Specify mitigation measures for reasonably foreseeable significant environmental effects and commit the County and the applicant to future measures containing performance standards to ensure their adequacy when detailed development plans and applications are submitted (CEQA Guidelines section 15126.4).

The public, including City residents and other local and State resource agencies, will be given the opportunity to review and comment on the CEQA Draft IS/ND document during a 20-day public review period. Comments received during the review period will be considered before adoption of any portion of the project, including, without limitation, the IS/ND.

2.0 PROJECT DESCRIPTION

2.1 Project Features

The proposed development features the construction of two new buildings: a 7,220-square-foot warehouse building with mezzanine, and a 4,842 square-foot office building for a utility company, with a total of 25 parking spaces and one loading stall on a lot measuring 31,490 square feet (0.723 acre) (the "Project"). The proposed office building will include five enclosed offices and three cubicles as well as ancillary uses, such as a breakroom, copy room, storage, etc. The warehouse will be used to park trucks and store equipment/materials. There will not be any manufacturing or repair in the warehouse, and the warehouse will not be used as a distribution center. It is estimated that the Project can accommodate 14 employees (six permanent in the office and, between five and eight, in and out of the warehouse/field office throughout the day).

2.2 Project Location and Site Plan

The Project is located on the real property measuring 31,490 square feet (0.723 acres) located at 10145 Artesia Place, Bellflower, CA 90706 (APN 7161-005-025) (the "Property"). The Property

is located within the 10000 block and north side of Artesia Place, bordered by Woodruff Avenue to the east and Beverly Street to the north, in the City of Bellflower. The generally rectangular shaped lot is elongated in a north to south direction with topography of the relatively level parcel descending gradually from north to south on the order of a few feet. The Property was once occupied by a commercial development that was later completely demolished. The Property is adjacent to industrial uses, to the west, and across Woodruff Avenue, to the east. Commercial uses are located to the south across Artesia Place, and the Artesia freeway is located to the north of the Property. Figure 2-1 provides an overview of the Project vicinity. Figure 2-2 shows the proposed site plan.

2.3 Existing General Plan Land Uses and Zoning Designations

The City's General Plan provides the basic framework for development within the community. Four of the seven State-mandated elements of the General Plan were adopted in 1995. The Land Use Element was adopted in 1997. The Land Use Element establishes goals, policies, and implementation programs for the manner in which new development and redevelopment will occur, and existing uses will be conserved in the City of Bellflower. The Land Use Element contains provisions that relate to the physical development of the City and to the organization of the City's environment in a functional and aesthetic pattern. The following policies and implementation programs address industrial issues:

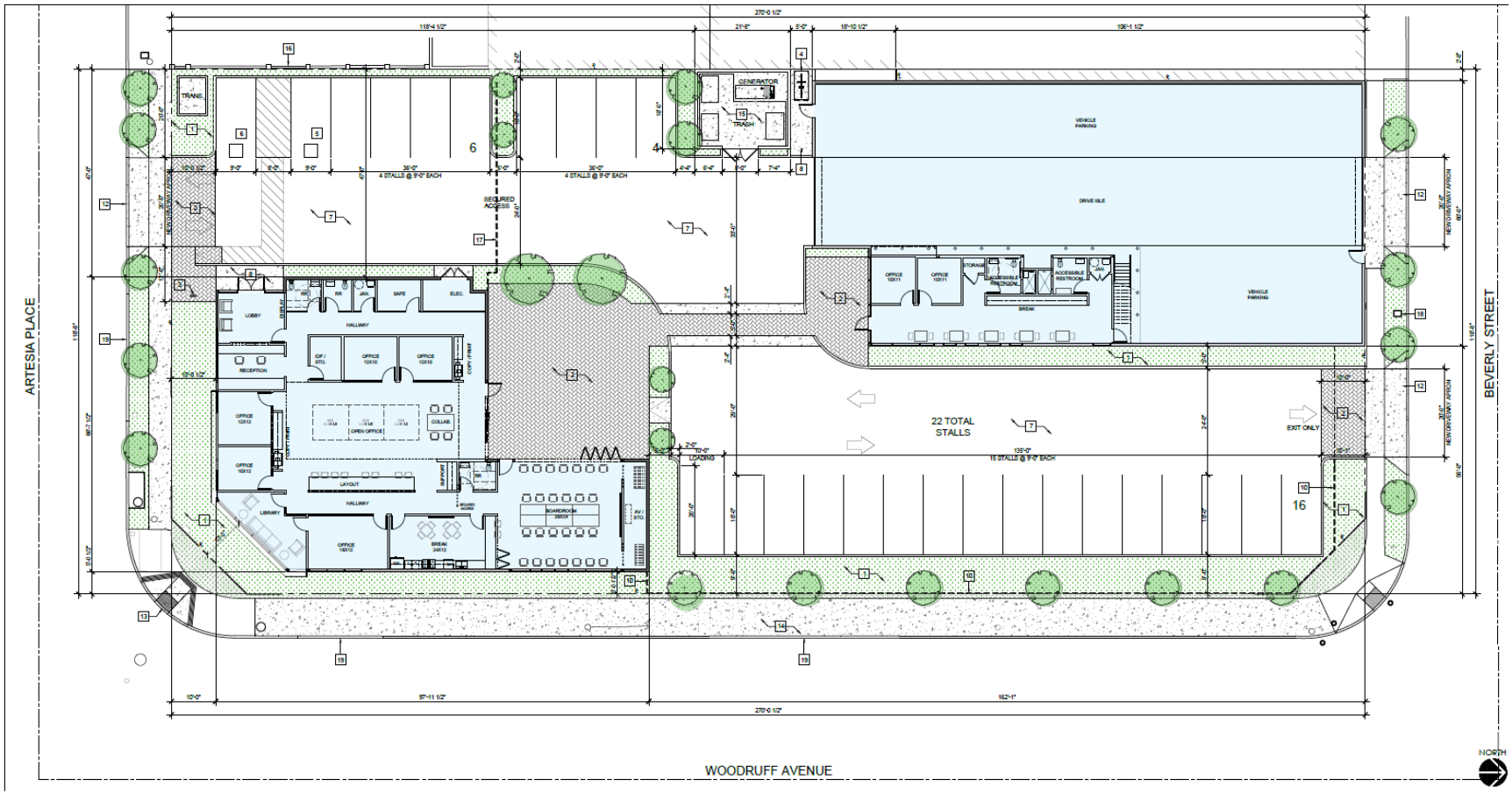
- Policy 1: Have zoning development standards, allowed uses, fees, and infrastructure improvements in place to encourage retention, expansion, and recruitment of industrial businesses; and
- Policy 2: Attract new industries to provide jobs for residents.

The Planning Department enforces Title 17, the Zoning Code of the City of Bellflower. The Property is currently zoned M-1 (Light Industrial). The Light Industrial District is intended to provide for the development and establishment of certain industrial uses considered by the City Council to be essential to the development of a balanced economic basis for the City. These uses include fabrication, manufacturing, and assembly or processing of materials that are in processed form, but which do not create smoke, gas, odor, dust, sound, vibration, soot, or lighting to any degree which might be termed obnoxious or offensive to any person residing or conducting business within the City. Because the Project does not comply with all the provisions of Bellflower Municipal Code ("BMC") for Light Industrial (M-1) Zone, a variance has been requested. The variance requests and justifications are listed below:

- BMC 17.52.110: (A)(1) A 6-foot fence in front yard setback:
  - Increased height required for security; and
  - Increased height from 42 inches (3.5 feet) to six feet is consistent with the neighborhood character and adjacent properties.
- BMC 17.52.060: (B) Building setback reductions on Beverly Street and Woodruff Avenue:
  - Required for security; and
  - Consistent with adjacent properties and neighborhood character.

Figure 2-1: Project Vicinity

Figure 2-2: Proposed Site Plan



2.4 Surrounding Land Uses in the Project Vicinity

As shown in Figure 2-1, the Property is adjacent to industrial uses to west and across Woodruff Avenue to the east. Commercial uses are located to the south across Artesia Place, while the Artesia freeway is located to the north of the Property. The nearest sensitive receptors are single-family houses, which are located approximately 120 feet to the west of the Property.

2.5 Construction

Since the Property is already vacant and generally flat, site preparation and grading activities are expected to be relatively minimal. No demolition of existing structures is required. Construction is expected to take approximately six months and will begin upon the issuance of construction permits.

2.6 Required Discretionary Approvals

The City is the CEQA lead agency, with the Bellflower City Planning Commission holding primary responsibility for considering and potentially adopting this IS/ND, approving the Project's components, and authorizing construction contracts. The City's Planning and Building Services Department enforces the City's zoning code, building and construction code, and other regulations to ensure development is consistent with the City's standards. Development Review ("DR") approval by the Planning Commission is required to allow for the proposed design. Planning Commission approval is also required for a variance from the setback and fence height requirements of the BMC, including the following:

- BMC 17.52.110: (A)(1) When any M-1 zoned lot has common side or rear property line with any R-zoned property, a six-foot masonry or concrete wall shall be constructed and maintained, provided no wall or fence shall not exceed 42 inches in height where it is in the front yard area of an abutting residential use or district;
    - The Project will have a six-foot fence in front yard for security.
- BMC 17.52.060:

  (A) Interior lots shall have a front yard setback of not less than 10 feet from the front property line, or ultimate right-of-way, whichever is greater, and no building nor structure, nor the enlargement thereof, shall hereafter be erected unless the required front yard setback is provided, and through lots shall maintain the required front yard setback on both abutting streets.

  (B) Corner lots, reversed corner lots, and properties fronting more than one street shall provide setbacks per separate street frontage as required by subsection (A) of this section, including minimum setback from ultimate right-of-way[2].
    - Building setback reduction on Beverly Street for security; and
    - Building setback reduction on Woodruff Avenue for security.

Additionally, the Project will need to obtain all necessary construction permits, including, without limitation building, grading, and stormwater permits, before beginning any construction.

[2] The Project is seeking variance from subsection B, which refers back to subsection A.

Adherence to regulations of the following agencies may be required:

- The Los Angeles Regional Water Quality Control Board ("LARWQCB") (e.g., Order No R4-2012-0175 (National Pollutant Discharge Elimination System ["NPDES"] Permit No. CAS004001); and
- The South Coast Air Quality Management District ("SCAQMD") (e.g., SCAQMD Rule 403, *Fugitive Dust*).

2.7 Native American Consultation

This Project also requires consultation related to tribal cultural resources ("TCR") as follows:

- Approved in 2014, Assembly Bill ("AB") 52 establishes a formal consultation process for California Native American tribes to identify potential significant impacts to TCRs, as defined in PRC section 21074, as part of CEQA. As specified in AB 52, lead agencies must provide notice to tribes that are traditionally and culturally affiliated with the geographic area of a project if the tribe has submitted a written request to be notified. The tribe must respond to the lead agency within 30 days of receipt of the notification if it wishes to engage in consultation on the Project, and the lead agency must begin the consultation process within 30 days of receiving the request for consultation.

  In compliance with AB 52, a notice was provided to applicable tribes as identified by the City on June 17, 2024, that a CEQA IS was being prepared and the City and the applicant solicited requests for consultation. The tribes notified include Santa Rosa Band of Cahuilla Indians, Soboba Band of Luiseno Indians, San Gabriel Band of Mission Indians, and Gabrieleno Band of Mission Indians. Vanessa Minott of Santa Rosa Band of Cahuilla Indians did not have any comments; Soboba Band of Luiseno Indians deferred to San Gabriel Band of Mission Indians; and Gabrieleno Band of Mission Indians – Kizh Nation requested to schedule a consultation. On October 16, 2024, City staff consulted with the Chairman and staff members of the Gabrieleno Band of Mission Indians – Kizh Nation to acquire applicable information and discuss any potential concerns as related to the Project. They had no specific concerns about the project but provided historical information about their tribal government relative to the Bellflower area.

3.0 ENVIRONMENTAL CHECKLIST

The CEQA Guidelines provide an environmental checklist in Appendix G that forms a standard evaluation tool to identify a Project's adverse environmental impacts. This checklist identifies and evaluates potential adverse environmental impacts that may be created by the Project.

3.1 Environmental Factors Potentially Affected

The Project is not anticipated to have any significant adverse environmental effect, including exacerbating existing adverse environmental conditions. An explanation relative to the determination of impacts can be found following the checklist questions for each resource area.

☐ Aesthetics	☐ Agriculture/Forestry Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Energy
☐ Geology/Soils	☐ Greenhouse Gas Emissions	☐ Hazards and Hazardous Materials
☐ Hydrology/Water Quality	☐ Land Use/Planning	☐ Mineral Resources
☐ Noise	☐ Population/Housing	☐ Public Services
☐ Recreation	☐ Transportation	☐ Tribal Cultural Resources
☐ Utilities/Service Systems	☐ Wildfire	☐ Mandatory Findings of Significance

3.2 Determination

On the basis of this initial evaluation (check one):

- ☑ I find that the proposed Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ☐ I find that although the proposed Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the Project have been made by or agreed to by the Project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- ☐ I find that the proposed Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- ☐ I find that the proposed Project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- ☐ I find that although the proposed Project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed Project, nothing further is required.

Signature: RgConcepcion **Date:** February 12, 2025

Printed Name: Rowena Genilo-Concepcion **Title:** Planning Manager

3.3 Environmental Checklist and Discussion

This section provides a discussion of the potential environmental impacts of the Project. The evaluation of environmental impacts follows the questions provided in the Appendix G Checklist of the CEQA Guidelines.

For each question listed in the Appendix G checklist, a determination of the level of significance of the impact is provided. Impacts are assigned to one of the following categories:

- A designation of no impact is given when no adverse changes in the environment are expected;
- A less than significant impact would cause no substantial adverse change in the environment;
- A less than significant impact with mitigation incorporated would have a substantial adverse impact on the environment but could be reduced to a less than significant level with incorporation of mitigation measure(s); and
- A potentially significant impact would cause a substantial adverse effect on the environment, and no feasible mitigation measures would be available to reduce the impact to a less than significant level.

A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency relied upon for the scoping analysis. A No Impact answer is adequately supported if the referenced information sources show that the impact simply does not apply to the Project (e.g., the Project falls outside a fault rupture zone). A No Impact answer should be explained where it is based on Project-specific factors as well as general standards (e.g., the Project will not expose sensitive receptors to pollutants, based on a Project-specific screening analysis).

All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as Project-level, indirect as well as direct, and construction as well as operational impacts.

Once it is determined that a particular physical impact may occur, then the checklist answers must indicate if the impact is potentially significant, less than significant with mitigation, or less than significant.

"Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more Potentially Significant Impact entries when the determination is made, an Environmental Impact Report ("EIR") is required.

"Less Than Significant with Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from Potentially Significant Impact to a Less Than Significant Impact. Mitigation measures are identified and explain how they reduce the effect to a less than significant level.

Explanation of each issue identifies:

- The significance criteria or threshold, if any, used to evaluate each question; and
- The mitigation measure identified, if any, to reduce the impact to less than significant.

3.3.1 Aesthetics

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
I. Aesthetics. Except as provided in Public Resources Code Section 21099, would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☑
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☑
c) In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surrounddings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☑	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☑	☐

Environmental Setting:

Scenic vistas can be impacted by development in two ways. First, a structure may be constructed that blocks the view of a vista. Second, the vista itself may be altered (i.e., development on a scenic hillside). The City's General Plan Open Space/Recreation Element addresses the management of natural resources and the preservation and enhancement of scenic and recreation opportunities in the City. The City is urbanized and developed with commercial, industrial, residential, and public uses and structures. The City's General Plan does not specifically list or identify any designated scenic vistas or specific scenic resources within the City.

Environmental Determination:

a) Have a substantial adverse effect on a scenic vista?

No Impact. Because no designated scenic vistas were identified within the Project area, the Project would not result in an adverse effect on any scenic vista.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

No Impact. According to the California Department of Transportation (Caltrans), there are no eligible or officially designated State scenic highways within or in proximity to the City. The portion of the State Route 91 that is designated as a scenic highway is approximately 16 miles to the east of the Property. Because the Property is not within or visible from a State scenic highway, the Project would not damage scenic resources within a State scenic highway. No impact would occur.

c) In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Less than Significant Impact. The Project would involve new office and storage warehouse buildings in an urbanized area, zoned for light industrial uses. The Project would be developed on a vacant lot; however, visual impacts associated with the proposed development would be similar to those that would occur under the existing zoning designation for these areas. The Project is seeking a variance from the BMC for an increased fence height in the front yard setback and building setback reductions on both Beverly Street and Woodruff Avenue for security. The variances required for this development will conform with the general development patterns of similar properties in the vicinity and district in which the Property is located. The primary pattern in commercial properties observed along both Beverly Street and Woodruff Avenue include zero-foot setbacks and/or fences over 42" in the front setback.. With the variance, the Project would not conflict with applicable zoning and other regulations governing scenic quality. Impacts would be less than significant.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Less than Significant Impact. The Property is adjacent to industrial uses to west and across Woodruff Avenue to the east. Commercial uses are located to the south across Artesia Place, while the Artesia freeway is located to the north of the Property. The Project would include new sources of light, such as parking lot lighting, as well as lighting used for the office and warehouse buildings for safety and security purposes. Although new light sources could increase spillover light onto adjacent land uses, the Project is designed to and must comply with applicable law, including, without limitation, the BMC governing light and glare. Lighting would be downward shielded and of similar intensity as existing lighting. Additionally, the proposed development will conform with the general development patterns of similar properties in the vicinity and district in which the Property is located Therefore, the Project would not adversely affect day or nighttime views in the area. Impacts would be less than significant.

Mitigation Measures:

None required.

3.3.2 Agriculture and Forestry Resources

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
II. Agriculture and Forestry Resources. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?	☐	☐	☐	☑
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☑
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☐	☑
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☑
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☑

Environmental Setting:

The Project is in the City and within the greater Los Angeles metropolitan area, which is largely developed and urbanized. Although the City has properties that are allowed to engage in agricultural uses, the California Department of Conservation ("CDOC") Farmland Mapping and Monitoring Program does not classify any lands within the City as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance ("Farmland").

Environmental Determination:

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

No Impact. The CDOC Farmland Mapping and Monitoring Program does not classify any lands within the City as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. Therefore, there would be no impact on agricultural resources.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact. The Property is zoned for light industrial development and is not zoned for agricultural use. No land within the City is enrolled in a Williamson Act contract (CDOC 2017). Therefore, there would be no impact related to zoning for agricultural use or a Williamson Act contract.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

No Impact. The Project is zoned for light industrial development. There are no areas within the City that are zoned for forest land, timberland, or timberland zone timberland production. Therefore, the Project would not conflict with existing zoning for, or cause rezoning of, timberland. No impact would occur.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. The Property is not currently forest land, and no forest land is located within the City. Therefore, there would be no impact on forest resources.

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?

No Impact. The Project has not been used for agriculture or forest land, and there is no farmland or forest land located within the vicinity that may be affected by the development of the Project. Therefore, the Project would not result in the conversion of farmland to non-agricultural use or conversion of forest land to non-forest use.

Mitigation Measures:

None required.

3.3.3 Air Quality

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
III. Air Quality. Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☑	☐
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard?	☐	☐	☑	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☑	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☑	☐

Summary:

Estimated construction and operational impacts are evaluated against quantitative criteria established by the SCAQMD. These criteria are relied upon by cities and counties to make significance determinations based on mass emissions of "criteria" pollutants[3]. As shown in Tables 3-3 through 3-6 (below), the Project would result in a less than significant impact related to construction and operations emissions and consequently would be considered by the SCAQMD to not be cumulatively considerable. Further, the Project would not conflict with SCAQMD planning goals, cause substantial air pollutant concentrations, or be a source of objectionable odors.

Environmental Setting:

The SCAQMD has established quantitative thresholds for short-term (construction) and long-term (operational) emissions for the criteria pollutants ozone, carbon monoxide,

[3] Criteria pollutants are pollutants for which health-based ambient air quality standards have been set through federal and/or State regulations. In the case of ozone, which is not a directly emitted pollutant but rather is formed in the atmosphere via photochemical reactions, the thresholds are set for the precursor emissions of oxides of nitrogen ("NO_x") and volatile organic compounds ("VOC").

nitrogen dioxide, sulfur dioxide; respirable and fine particulate matter (PM_{10} and $PM_{2.5}$),; and lead. The characteristics and health effects of these pollutants are described below:

- Ozone ("O_3"): A nearly colorless gas formed by photochemical reactions involving nitrogen dioxide and volatile organic compounds under sunlight. Ground-level O_3 exposure can cause lung irritation, wheezing, coughing, pain when taking a deep breath, and breathing difficulties during exercise or outdoor activities. It can also lead to permanent lung damage, aggravated asthma, and increased susceptibility to respiratory illnesses.
- Carbon Monoxide ("CO"): A colorless and odorless toxic gas primarily associated with the incomplete combustion of fossil fuels in motor vehicles. CO combines with hemoglobin in the bloodstream, reducing the amount of oxygen that can be circulated through the body. High CO concentrations can lead to headaches, aggravation of cardiovascular disease, and impairment of central nervous system functions.
- Nitrogen Dioxides ("NO_2"): A yellowish-brown gas that can cause breathing difficulties at high levels. NO_2 is formed when nitric oxide, a pollutant from internal combustion processes, combines with oxygen.
- Sulfur Dioxide ("SO_2"): A colorless, pungent gas formed primarily by the combustion of sulfur-containing fossil fuels. Health effects include acute respiratory symptoms and difficulty breathing, particularly for children.
- Respirable Particulate Matter ("PM_{10}") and Fine Particulate Matter ("$PM_{2.5}$"): Particulate matter equal to or less than ten microns ("PM_{10}") and two and one-half microns ("$PM_{2.5}$") in diameter, respectively. These microscopic particles pose a greater health risk as they can more easily cause irritation. Particulate matter includes both aerosols and solid particles, such as fugitive dust. Short-term exposure to high $PM_{2.5}$ levels is associated with premature mortality, increased hospital admissions, and emergency room visits. Long-term exposure can lead to the development of chronic respiratory disease. Short-term exposure to high PM_{10} levels is associated with hospital admissions for cardiopulmonary diseases, increased respiratory symptoms, and possible premature mortality.
- Lead: A metal found naturally in the environment and in manufactured products, with major sources of emissions historically being mobile and industrial sources. Lead accumulates in the environment and in animals, affecting the body's blood-forming, nervous, and renal systems. It can also impact the reproductive, endocrine, hepatic, cardiovascular, immunological, and gastrointestinal systems, although individual responses to lead exposure can vary significantly.

The SCAQMD regulates air quality in portions of Los Angeles, Orange, Riverside, and San Bernardino counties and is primarily responsible for comprehensive air pollution control in the South Coast Air Basin ("SCAB") where the Project would be located. The SCAQMD develops rules and regulations, establishes permitting requirements for stationary sources, inspects emission sources, and enforces these measures through educational programs or fines. The SCAQMD is directly responsible for reducing emissions from stationary (area and point), mobile, and indirect sources and has prepared

a series of Air Quality Management Plans ("AQMPs") to address what emissions reductions are needed and how they will be achieved.

Existing Conditions:

Ambient air quality data are monitored at many locations throughout the SCAB. The monitoring station at Signal Hill is considered to be the most representative of the air quality at the proposed Property because they are both within the South Coastal Los Angeles County monitoring area (SCAQMD 1999). Pollutants measured at this monitoring station include O_3, PM_{10}, $PM_{2.5}$, and NO_2. CO is not monitored at this station, therefore, CO data from the Compton monitoring station within the South Central Los Angeles County monitoring area were selected. The most recent three years of available data from 2021-2023 for these monitoring stations are presented in Table 3-1 (SCAQMD 2024). Federal and State air quality standards are presented with the number of times those standards were exceeded.

Table 3-1: Air Quality Levels Measured at the Signal Hill/Compton Monitoring Stations During 2021-2023

Pollutant	CAAQS	NAAQS	Year	Max. Level	Days State Standard Exceeded	Days National Standard Exceeded
O_3 (1 hour)	0.09 ppm	None	2021	0.086	0	NA
			2022	0.108	1	NA
			2023	0.089	0	NA
O_3 (8 hour)	0.070 ppm	0.070 ppm	2021	0.064	0	0
			2022	0.077	1	1
			2023	0.065	0	0
PM_{10} (24 hour)	50 µg/m^3	150 µg/m^3	2021	--	--	--
			2022	57	2 (1%)	0 (0%)
			2023	80	3 (1%)	0 (0%)
PM_{10} (AAM)	20 µg/m^3	None	2021	--	NA	NA
			2022	24.7	NA	NA
			2023	21.2	NA	NA
$PM_{2.5}$ (24 hour)	None	35 µg/m^3	2021	--	NA	--
			2022	28.8	NA	0 (0%)
			2023	26.5	NA	0 (0%)
$PM_{2.5}$ (AAM)	12 µg/m^3	15 µg/m3	2021	--	NA	NA
			2022	10.8	NA	NA
			2023	10.12	NA	NA
NO_2 (1 hour)	0.18 ppm	0.100 ppm	2021	0.059	NA	NA
			2022	0.0581	NA	NA
			2023	0.0562	NA	NA
NO_2 (AAM)	0.030 ppm	0.053 ppm	2021	0.013	0	0
			2022	0.013	0	0
			2023	0.011	0	0

Pollutant	CAAQS	NAAQS	Year	Max. Level	Days State Standard Exceeded	Days National Standard Exceeded
CO (1 hour)	20 ppm	35 ppm	2021	4.3	0	0
			2022	3.4	0	0
			2023	3.2	0	0
CO (8 hour)	9 ppm	9 ppm	2021	3.7	0	0
			2022	3.0	0	0
			2023	2.6	0	0

Source: SCAQMD 2024.

Notes:

CO from Compton, all other pollutant concentrations from Signal Hill monitoring station.

ppm: parts per million; µg/m^3: micrograms per cubic meter; AAM: Annual Arithmetic Mean; NA: indicates that there is no applicable standard. –: Data Not Reported or insufficient data available to determine the value.

Regulatory Setting:

The U.S. Environmental Protection Agency ("U.S. EPA") has established National Ambient Air Quality Standards ("NAAQS") for the seven criteria pollutants discussed above (U.S. EPA 2021). The California Air Resources Board ("CARB") has also set California Ambient Air Quality Standards ("CAAQS") for these seven pollutants as well as a few others, which are generally the same or some are more stringent than the NAAQS. Based on monitored air pollutant concentrations, the U.S. EPA and CARB designate an area's status regarding the attainment of the NAAQS and CAAQS, respectively, for selected criteria pollutants. If a region fails to meet these standards, the U.S. EPA and CARB designate it as "nonattainment," and the regional air quality agency must develop plans to achieve the standards. These attainment designations for the Project area are shown in Table 3-2. As identified in Table 3-2, the portion of the SCAB where the Project is located is classified as federal nonattainment area for O_3 and $PM_{2.5}$ and a State nonattainment area for O_3, PM_{10}, and $PM_{2.5}$.

Table 3-2: Attainment Status of Criteria Pollutants in the Project Area

Pollutant	State	Federal
O_3	Nonattainment	Extreme Nonattainment
PM_{10}	Nonattainment	Attainment/Maintenance
$PM_{2.5}$	Nonattainment	Serious Nonattainment
CO	Attainment	Attainment/Maintenance
NO_2	Attainment	Attainment/Maintenance
SO_2	Attainment	Attainment
Lead	Attainment	Attainment/Nonattainment
All others	Attainment or Unclassified[a]	No standards

Sources: SCAQMD 2016; CARB 2022a; U.S. EPA 2023.

Note:

a. "Unclassified" designation indicates that the air quality data for the area are incomplete and do not support a designation of attainment or nonattainment.

Environmental Determination:

a) Conflict with or obstruct implementation of the applicable air quality plan?

Less Than Significant Impact. The Property is located in the SCAB, comprising all of Orange County and the non-desert regions of Los Angeles, Riverside, and San Bernardino Counties. The SCAQMD is the agency primarily responsible for comprehensive air pollution control in the SCAB and reducing emissions from area and point stationary, mobile, and indirect sources.

The SCAQMD prepared the 2022 AQMP to meet federal and State ambient air quality standards ("AAQS"). The 2022 AQMP contains a comprehensive list of pollution control strategies directed at reducing emissions and achieving AAQS. These strategies are developed, in part, based on regional population, housing, and employment projections prepared by the Southern California Association of Governments ("SCAG"). SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties, and it addresses regional issues relating to transportation, the economy, community development, and the environment. With regard to future growth, SCAG prepared the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy – Connect SoCal ("2020-2045 RTP/SCS"), which provides population, housing, and employment projections for cities within its territorial jurisdiction. The growth projections in the 2020-2045 RTP/SCS are based in part on projections originating under County and City General Plans. These growth projections were utilized in the preparation of the air quality forecasts and consistency analysis included in the 2022 AQMP. The 2020-2045 RTP/SCS was approved in September 2020 by the SCAG's Regional Council. Consistency with the RTP/SCS is also discussed in the Greenhouse Gas and Transportation/Traffic sections of this IS.

The 2022 AQMP was adopted by the SCAQMD as a program to lead the SCAB into compliance with several criteria pollutant standards and other federal requirements. It relies on emissions forecasts based on demographic and economic growth projections provided by SCAG's 2020-2045 RTP/SCS. SCAG is charged by California law to prepare and approve "the portions of each AQMP relating to demographic projections and integrated regional land use, housing, employment, and transportation programs, measures and strategies." Projects whose growth is included in the projections used in the development of the AQMP are considered to be consistent with the plan and would not conflict with, or obstruct with, its implementation. The SCAQMD recommends that, when determining whether a project is consistent with the current AQMP, a lead agency must assess whether the project is consistent with the demographic and economic assumptions (typically land use-related, such as resultant employment or residential units) upon which the plan is based.

A significant air quality impact may occur if a project is inconsistent with the AQMP or would in some way represent a substantial hindrance to employing the policies or obtaining the goals of that plan. The Project involves the construction of office and warehouse buildings on vacant, undeveloped land. The Project would include five enclosed offices and three cubicles. It is estimated that there will be 14 new employees that would be employed by the Project uses. Due to the small magnitude of anticipated employees, the Project would not cause a substantial increase in the local population that would exceed

the growth projections in the City's General Plan, Housing Element (Bellflower 2022). Further detail is discussed in section 3.3.14 Population and Housing. In addition, the Project provides employment opportunities to the residents of the City and would improve the potential for local employment of the area which may result in shorten vehicle trips and its resulting air pollutant emissions. Thus, the Project would not conflict with or obstruct implementation of the 2022 AQMP.

Furthermore, the Project is not a new stationary source of emissions and the warehouse will not be used as a distribution center, such that the Project does not exceed the SCAQMD's established thresholds of potential significance for regional and localized air quality impacts during construction or operation. Construction activities would comply with SCAQMD Rule 403, *Fugitive Dust*, which requires daily watering of unpaved areas to stabilize soil and prevent wind erosion events. SCAQMD Rule 2305, *Warehouse Indirect Source Rule*, was adopted to minimize emissions from large warehouses (100,000 square-feet of floor space). Since the Project will develop 7,220 square-feet of warehousing, the rule would not apply to this development. Thus, the Project is not expected to conflict with or obstruct the implementation of the AQMP and SCAQMD rules. Therefore, impacts would be less than significant.

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Less Than Significant Impact. In order to evaluate impacts, quantitative significance criteria established by the local air quality agency, such as the SCAQMD, may be relied upon to make significance determinations based on emissions of criteria pollutants. Project-related emissions are assessed on their contribution to regional air quality, as well as local air quality, at receptors near the Property. For the purposes of a Localized Significance Threshold ("LST") analysis, described in detail in question (c) below, the SCAQMD considers receptors as off-site locations where persons may be exposed to the emissions from project activities. Receptor locations include residential, commercial and industrial land use areas.

A significant impact would occur if the Project would violate any air quality standard or contribute substantially to an existing or projected air quality violation. Project construction and operation emissions are estimated using the California Emissions Estimator Model® ("CalEEMod"), the statewide land use emissions computer model designed to quantify potential criteria pollutant and greenhouse gas ("GHG") emissions associated with both construction and operations from land use projects. A project's impact on air quality is deemed significant if it produces emissions that surpass the limits set by federal, state, or regional authorities, or if it notably adds to a current or anticipated air quality infringement. Conversely, if a project's daily emissions fall below the significance thresholds for air quality as determined by the SCAQMD, it is considered to have a minimal impact on the regional air quality. Although the SCAQMD has established these thresholds to gauge the potential regional and local effects on air quality, they do not reflect the direct health consequences, such as the rates of asthma, bronchitis, or other respiratory diseases. The primary goal of these thresholds is to identify projects that could

lead to air pollutant levels that either exceed the standards or hinder the air district's efforts to meet ambient air quality objectives.

Construction-Related Regional Impacts:

Construction emissions associated with development of a project occurs from off-road construction vehicle exhaust, fugitive dust from soil disturbance, on-road emissions from haul trucks and worker vehicles, and evaporative emissions from architectural coatings and asphalt. The Project's construction emissions were quantified using the CalEEMod model (CalEEMod 2024). According to the CalEEMod model results, provided in Appendix A, overall construction (maximum daily emissions) for the Project would not exceed the SCAQMD's regional thresholds for the criteria pollutants. As such, the Project would result in less than significant impacts from construction emissions to regional air quality, and no mitigation measures are required.

Table 3-3: Construction Emissions Summary and Significance Evaluation

Criteria Pollutants	Project Emissions[a] (lbs/day)	Construction Threshold[b] (lbs/day)	Significant?
VOC[c]	24	75	No
NO_x	11	100	No
CO	11	550	No
SO_x	<1	150	No
Total PM_{10}[d]	3	150	No
Total $PM_{2.5}$[d]	2	55	No

Notes:

a. Emissions from CalEEMod version 2022.1.1.24 (see Appendix A) and the values shown in lbs/day are winter or summer maximums for construction of the planned land use.

b. SCAQMD 2023.

c. Thresholds are given as VOC while the CalEEMod outputs are Reactive Organic Gases ("ROG"), which are considered equivalent for this comparison.

d. Total PM_{10}/$PM_{2.5}$ comprises fugitive dust plus engine exhaust.

Operation-Related Regional Impacts:

Operational emissions associated with the Project were calculated using CalEEMod and consist of emissions related to energy use, mobile sources, area sources, solid waste, and water distribution. Energy emissions are from the consumption of natural gas and electricity generated elsewhere. Mobile emissions are from vehicles traveling to and from the Property. Area source emissions are associated with the use consumer products, architectural coatings, and landscaping equipment. The primary sources of emissions associated with the Project are associated with mobile- and energy-related emissions, with lesser contributions from operational activities, such as landscape equipment and water use.

As shown in Table 3-4, the operations phase of the Project is estimated to generate less than the SCAQMD thresholds and would result in a less than significant impact to regional air quality. As such, no mitigation measures are required.

Table 3-4: Operational Emissions Summary and Significance Evaluation

Criteria Pollutants	Operation Emissions[a] (lbs/day)	Operation Threshold[b] (lbs/day)	Significant?
VOC[c]	1	55	No
NO_x	<1	55	No
CO	3	550	No
SO_x	<1	150	No
Total PM_{10}[d]	1	150	No
Total $PM_{2.5}$[d]	<1	55	No

Notes:

a. Emissions from CalEEMod version 2022.1.1.24 (see Appendix A) and the values shown in lbs/day are winter or summer maximums for construction of the planned land use.

b. SCAQMD 2023.

c. Thresholds are given as VOC while the CalEEMod outputs are ROG, which are considered equivalent for this comparison.

d. Total PM_{10}/$PM_{2.5}$ comprises fugitive dust plus engine exhaust.

c) Expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact. The SCAQMD's *CEQA Air Quality Handbook* (SCAQMD 1993) defines sensitive receptor land uses as residences, schools, daycare centers, playgrounds, and medical facilities. The nearest sensitive receptors are residences, located approximately 120 feet to the west of the Property. The SCAQMD has developed LSTs to determine whether a project would result in excessive criteria air pollutant emissions to local sensitive receptors proximate to the Property (SCAQMD 2008). For the purposes of an LST analysis, the SCAQMD considers receptors where an individual could remain for 1 hour for NO_2 and CO exposure, and 24 hours for PM_{10} and $PM_{2.5}$ exposure. Since the Property is adjacent to industrial uses to the west, the closest analysis distance provided by the SCAQMD of 25 meters (82 feet) away from the Property boundary was used in the analysis. The emissions limits in the lookup tables are based on analyses performed by the SCAQMD to determine potential exceedances of the AAQS. The Property is located within source-receptor area ("SRA") Zone 5 – Southeast Los Angeles County. The 1-acre screening lookup tables were used to evaluate NO_x, CO, PM_{10}, and $PM_{2.5}$ impacts on nearby receptors. As such, if a project is below the LSTs at the closest receptors, the Project's impacts would be below the LSTs for receptors located further away, since the Project impacts generally decrease with distance.

Construction-Related Localized Impacts:

The LST results in Table 3-5 show that on-site emissions from the construction phases of the Project would be below the SCAQMD's LST at the nearest receptors. As such, localized emissions attributable to construction of the Project would result in less than significant localized air quality impacts and would not expose sensitive receptors to substantial pollutant concentrations. No mitigation measures are needed.

Table 3-5: Construction Localized Significance Threshold Evaluation

Criteria Pollutants	On-site Emissions[a] (lbs/day)	Localized Thresholds[b] (lbs/day)	Significant?
NO_x	11	80	No
CO	14	571	No
PM_{10}	3	4	No
$PM_{2.5}$	1	3	No

Notes:

a. Emissions from CalEEMod version 2022.1.1.24 (see Appendix A).

b. SCAQMD 2008, for SRA Zone 5 – Southeast Los Angeles County, 1-acre area, 25 meters to receptor.

Operations-Related Localized Impacts:

Localized emissions associated with the operation of the Project are primarily attributable to on-site consumption of natural gas and electricity, local vehicle trips, and landscaping equipment. As shown in Table 3-6, the Project would result in on-site operations phase emissions which are less than the operation LSTs and, consequently, would result in less than significant impacts to local air quality. No mitigation is required.

Table 3-6: Operations Localized Significance Threshold Evaluation

Criteria Pollutants	On-site Emissions[a] (lbs/day)	Localized Thresholds[b] (lbs/day)	Significant?
NO_x	<1	80	No
CO	3	571	No
PM_{10}	<1	1	No
$PM_{2.5}$	<1	1	No

Notes:

a. Emissions from CalEEMod version 2022.1.1.24 (see Appendix A). 5% of total mobile emissions are assumed to occur at the Property.

b. SCAQMD 2008, for SRA Zone 5 – Southeast Los Angeles County, 1-acre area, 25 meters to receptor.

Toxic Air Contaminant Emissions from On-Site Construction and Operation:

Construction activities will result in short-term, project-generated emissions of diesel particulate matter ("DPM") from the exhaust of off-road, heavy-duty diesel equipment used for site preparation (e.g., excavation and grading), paving, building construction, and other miscellaneous activities. CARB identified DPM as a toxic air contaminant ("TAC") in 1998. The primary factor in determining health risk is the dose to which receptors are exposed. Dose depends on the concentration of the substance in the environment and the duration of exposure. Thus, the health risks for a maximally exposed individual ("MEI") are higher if exposure occurs over a longer period.

According to the California Office of Environmental Health Hazard Assessment ("OEHHA"), health risk assessments—which determine the exposure of sensitive

receptors to TAC emissions—should be based on a 40-year exposure period. However, such assessments should be limited to the duration of activities associated with the Project.

In this case, there will be relatively few pieces of off-road, heavy-duty diesel equipment in operation, and the total construction period will be relatively short compared to a 40-year exposure period. Additionally, due to the highly dispersive properties of DPM, the distance of the nearest sensitive uses (approximately 120 feet away), and reductions in particulate emissions from newer construction equipment (as required by U.S. EPA and CARB regulations), construction emissions of TACs will not expose sensitive receptors to substantial emissions of TACs. The impact will be less than significant, and no mitigation is required.

The operations phase of the Project would not result in substantial emissions of TACs due to the nature and size of the proposed office and warehouse buildings. Office workers would most likely drive gasoline vehicles rather than diesel, and large combustion equipment is not planned. These uses do not involve the generation of substantial quantities of TACs and, consequently, would not result in a significant impact from exposure of local receptors to TAC emissions.

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Less Than Significant Impact. Potential sources that may emit odors during construction activities include equipment exhaust and architectural coatings. Odors from these sources would be localized and generally confined to the immediate area surrounding the Property and would not constitute a public nuisance. The Project would utilize typical construction techniques, and the odors would be typical of most construction sites and temporary in nature. Construction of the Project would not cause an odor nuisance, and no mitigations are needed.

The Project would consist of buildings for offices and warehouse and would not include activities known to generate odors. Examples of land uses and industrial operations that have the potential to generate considerable odors include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. Therefore, the Project would result in a less than significant impact related to objectionable odors, and no mitigation is required.

Mitigation Measures:

None required.

3.3.4 Biological Resources

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IV. Biological Resources. Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☐	☑
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☐	☑
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☑
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☑
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☑
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☑

Environmental Setting:

The City is located within southern Los Angeles County and is highly urbanized. The Property is graded and lacks vegetation. Accordingly, the potential for candidate, sensitive, or special status species or habitats is low within City limits and in particular at the Property.

Environmental Determination:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

No Impact. The potential for candidate, sensitive, or special status species or habitats is low within City limits and especially at the Property. The CDFW's California Natural Diversity Database ("CNDDB") identifies six candidate, sensitive, or special status species or habitats within the Whittier quadrangle, which includes the City. These species include the western yellow-billed cuckoo (Coccyzus americanus occidentalis), bank swallow (Riparia riparia), coastal California gnatcatcher (Polioptila californica californica), least Bell's vireo (Vireo bellii pusillus), Crotch's bumble bee (Bombus crotchii), and the California Orcutt grass (Orcuttia californica). The Project would not introduce any land uses that would adversely affect biological resources. The Property is vacant, and no native vegetation is present on-site. Therefore, the Project is not expected to result in impacts to species identified as a candidate, sensitive, or special status. No impact would occur.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

No Impact. The Property is in a highly developed and urbanized area. Additionally, the Property was once occupied by a commercial development that was later completely demolished. The potential for riparian habitat or other sensitive natural communities on or adjacent to the Property is low. Thus, the Project would not result in a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFW or the U.S. Fish and Wildlife Service. Therefore, there would be no impact.

c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No Impact. The Property is in a highly developed and urbanized area. Additionally, the Property was once occupied by a commercial development that has since completely demolished. No wetlands are present on or adjacent to the Property. Thus, the Project would not have an adverse effect on any state or federally protected wetlands. Therefore, there would be no impact.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

No Impact. The Property is in a highly developed and urbanized area. Additionally, the Property was once occupied by a commercial development that has since been completely demolished. The Property is not within an established migratory wildlife corridor habitat linkage and does not contain suitable habitat for migratory fish or wildlife movement. It is not connected to regional natural open space areas. No impact would result to such resources from Project implementation.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

No Impact. BMC § 12.08.090 requires a permit for tree removal. However, there currently are no trees on-site nor would any trees need to be removed for this Project. Thus, the Project would not conflict with any local policies or regulations protecting biological resources. No impact would occur.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact. The City is not regulated by any Natural Community Conservation Plan ("NCCP") or Habitat Conservation Plan ("HCP"). Thus, the Project would not conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or state habitat conservation plan. No impact would occur.

Mitigation Measures:

None required.

3.3.5 Cultural Resources

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
V. Cultural Resources. Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☐	☐	☑
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☑	☐
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☐	☑	☐

Environmental Setting:

According to CEQA Guidelines § 15064.5(b), a project with an effect that may cause substantial adverse changes in the significance of a historical resource is a project that may have a significant impact on the environment. Substantial adverse change is defined as physical demolition, relocation, or alteration of a resource or its immediate surroundings, such that the significance of a historical resource would be materially impaired.

According to the Conservation Element of the City's General Plan, the City does not include sites listed on the California Register or National Register of Historic Places ("NRHP") (Bellflower 1994).

Environmental Determination:

a) Cause substantial adverse change in the significance of a historical resource pursuant to §15064.5?

No Impact. The City does not include sites listed on the California Register or NRHP (Bellflower 1994), and no buildings with historical significance are located within the Property. Therefore, no impacts would occur.

b) Cause substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

Less Than Significant. Since the Property was once occupied by a commercial development, the probability of archeological resources is low. However, with some excavation for building foundations and pipelines there exists a potential to encounter previously unreported subsurface historical and archaeological resources during construction activities. The Project incorporates the standard Project Feature ("PF") (PF-CUL-1) to ensure unanticipated impacts to cultural resources are less than significant. It should be noted that the Project design features listed below apply to all development projects (i.e., compliance with the requirements are required for all development projects) and pursuant to CEQA, are not considered mitigations.

c) Disturb any human remains, including those interred outside of dedicated cemeteries?

Less Than Significant. The discovery of human remains is a possibility during ground disturbance, especially during excavation. California law recognizes the need to protect interred human remains, particularly Native American burial sites and associated items of patrimony, from vandalism and inadvertent destruction. No known human remains are anticipated to be located on or beneath the Property. A number of regulatory provisions address the handling of human remains inadvertently uncovered during excavation activities. These include Health and Safety Code section 7050.5, PRC section 5097.98, and CEQA Guidelines section 15064.5(e). Pursuant to these codes, in the event of the discovery of unrecorded human remains during construction, excavations must be halted and the County Coroner must be notified. If the human remains are determined to be Native American, the California Native American Heritage Commission ("NAHC") would be notified within 24 hours, and the guidelines of the NAHC would be adhered to in the treatment and disposition of the remains. Compliance with these regulatory protocols

would ensure that impacts on human remains would be less than significant, and this issue need not be evaluated further.

Additionally, implementation of PF-CUL-2 would reduce the impact to less than significant. As stated previously, the Project Features listed below apply to all development projects (i.e., all development projects must comply with the requirements) and, pursuant to CEQA, regulatory compliance is not considered mitigation.

Project Features:

PF-CUL-1: Cease work if cultural resources are encountered during Project-related ground-disturbing activities, have a qualified archaeologist assess the significance of the resource, and implement appropriate avoidance or treatment measures.

If buried cultural materials are encountered during construction, work would be stopped until a qualified archaeologist can evaluate the nature and significance of the find. The need for archaeological and Native American monitoring during the remainder of the Project would be reevaluated by the City and a qualified archaeologist as part of the treatment measure determination. The archaeologist would consult with appropriate Native American representatives in determining suitable treatment for unearthed cultural resources if the resources are Native American in nature.

PF-CUL-2: Stop potentially damaging work within a 100-foot radius if human remains are uncovered during construction, have a qualified archaeologist assess the significance of the find, and pursue appropriate management.

Mitigation Measures:

None required.

3.3.6 Energy

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VI. Energy. Would the project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☑	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☑	☐

Environmental Setting:

The Project must be designed to comply with the latest energy standards that are required by the latest adopted California Title 24 Building Codes. The City's Climate Action Plan ("CAP") provides goals, policies, and implementation measures for sustainable building design and development for land uses occurring in the City. Implementation of these measures would reduce energy use and demand and promote energy conservation on-site to the extent practicable.

Environmental Determination:

An analysis of the Project's fuel and energy consumption is provided below:

Project Construction Fuel Consumption

The fuel consumption from the mobiles sources used for construction was calculated using the CalEEMod outputs. CalEEMod calculates mass emissions of GHGs, including CO_2, from offroad and onroad mobile sources associated with project construction. For construction, CalEEMod aggregates mobile source CO_2 emissions into four broad categories (typical fuel types assumed):

- Offroad equipment [diesel (Tiers 1-4)];
- Hauling [heavy-heavy duty diesel trucks (HHDT)];
- Vendor [medium-heavy and heavy-heavy duty diesel trucks (MHDT, HHDT)]; and
- Worker [light duty gasoline automobiles and trucks (LDA, LDT1, LDT2)].

For each category, diesel and gasoline fuel consumption can be estimated (back-calculated) using 2020 Climate Registry (40 CFR 98 Subpart C) emission factors for those fuels:

- Diesel Fuel Oil No. 2: 10.21 kg CO_2 per gallon [22.51 lbs CO_2 per gallon]; and
- Motor Gasoline: 8.78 kg CO_2 per gallon [19.36 lbs CO_2 per gallon].

Using the CalEEMod annual emissions results (MT CO_2) for each of the four mobile source categories (offroad, hauling, vendor, worker) and the corresponding CO_2 emission factors, Table 3-7 shows estimated fuel consumption during Project construction. As shown in Table 3-7, based on CalEEMod, Project construction would consume approximately 6,920 gallons of liquid fuels.

Table 3-7: Construction Mobile Source Energy Use

Mobile Sources	Types	Fuels	MT CO_2	CO_2 Emission Factor (kg/gal)	Fuel Consumption (gallons)
Off-Road	Tiers 1-4	Diesel	64	10.21	6,240
Hauling	HHDT	Diesel	0	10.21	0
Vendor	MHDT, HHDT	Diesel	3	10.21	280
Worker	LDA, LDT1, LDT2	Gasoline	3	8.78	400
Totals			**70**	**—**	**6,920**

Sources: CalEEMod, TCR 2020, 40 CFR 98 Subpart C

Project Operation Fuel Consumption

Similar to construction, CalEEMod calculates mass emissions of CO_2 from area and mobile sources associated with project operation. For operation, CalEEMod aggregates area and mobile source CO_2 emissions into three broad categories (typical fuel types assumed):

- Utility equipment [gasoline];
- Heavy Mobile [light-heavy, medium-heavy and heavy-heavy duty diesel trucks (LHDT, MHDT, HHDT)]; and
- Light Mobile [light and medium duty gasoline automobiles and trucks (LDA, LDT1, LDT2, MDV)].

For each category, diesel and gasoline fuel consumption can be estimated (back-calculated) using 2020 Climate Registry (40 CFR 98 Subpart C) emission factors for those fuels. Consistent with CalEEMod, operational vehicle fleet mixes comprise approximately 92% gasoline and 8% diesel fuel usage.

Using the CalEEMod annual emissions results (MT CO_2) for the area and mobile source categories and the corresponding CO_2 emission factors, Table 3-8 shows estimated fuel consumption during Project operation. As shown in Table 3-8, based on CalEEMod, project operation would consume approximately 9,370 gallons of liquid fuels annually.

Table 3-8: Operational Area and Mobile Source Energy Use

Sources	Types	Fuels	MT CO_2/year	CO_2 Emission Factor (kg/gal)	Fuel Consumption (gallons/year)
Area	Utility Equipment	Gasoline	0.2	8.78	30
Heavy Mobile	LHDT, MHDT, HHDT	Diesel	7	10.21	650
Light Mobile	LDA, LDT1, LDT2, MDV	Gasoline	76	8.78	8,690
Totals			**83**	**—**	**9,370**

Sources: CalEEMod, TCR 2020, 40 CFR 98 Subpart C

Project Operation Utilities Energy Consumption

Based on CalEEMod for the defined land use, Table 3-9 shows estimated natural gas and electric power usage for the Project.

As shown in Table 3-9, Project operation would result in natural gas usage of approximately 0.41 million cubic feet per year (MMcf/year), and utilization of approximately 190 megawatt-hours per year (MWh/year) of electric power.

Table 3-9: Operational Utility Energy Use

Utility Type	Quantity	Units
Natural Gas	0.41	MMcf/year
Electric Power[a]	190	MWh/year

Source: CalEEMod

a. Includes electricity consumption for building and water processes.

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Less Than Significant Impact. Construction of the Project would require consumption of petroleum fuels (diesel and gasoline) by the use of construction equipment on-site, by construction equipment delivering supplies to the Property, and by construction workers traveling to and from the Property. The energy required by construction would be temporary and would not be a substantial demand on energy resources. Electricity usage is anticipated to be relatively minor (if used for construction) compared to normal building operations. When not in use, electric equipment would be powered off so as to avoid unnecessary energy consumption. Moreover, there are no distinctive Project characteristics that would require the utilization of construction equipment that are less energy-efficient than comparable equipment at construction sites in other parts of the state. The energy consumed during the construction of the Project would facilitate the development of buildings that adhere to the latest energy efficiency standards outlined in California Title 24 Building Standards Code (the California Code of Regulations ("CCR"), Title 24, Part 6, California Energy Code).

The majority of the energy usage in the Project would consist of lighting, electronic devices, transportation fuels, and climate control. The Project must be designed and will be operated in accordance with the applicable California Building Codes ("CBC") (CCR, Title 24, Part 2) and the latest energy code standards (CCR, Title 24, Part 6), which impose energy conservation measures. For building energy usage, the Energy Efficiency Standards for Residential and Nonresidential Buildings (CCR, Title 24, Part 6) were established in 1978 in response to a legislative mandate aimed at reducing California's energy consumption. The current applicable standards are the 2022 Standards, which became effective on January 1, 2023 (CBC 2024). These standards play a crucial role in promoting energy-efficient practices and ensuring sustainable construction and operation of buildings in California. As such, the Project would not result in wasteful, inefficient, or unnecessary consumption of energy resources during construction or operations. In addition, energy efficiency for vehicles travelling to and from the Property are governed by the Corporate Average Fuel Efficiency standards, which establishes fuel efficiency standards. Furthermore, future vehicle purchases are affected by the State of California's Advanced Clean Cars II Rule, which will transition the vehicle fleet toward more energy-efficient electric vehicles. Therefore, energy impact of the Project would be less than significant, and no mitigation is required.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Less Than Significant Impact. As noted above, the energy required for construction would be temporary and would not be substantial nor would involve any atypical demand on energy resources. The Project would need to adhere to the energy efficiency standards adopted within the State of California's Title 24 Building Standards (CCR, Title 24, Part 6). These updated standards incorporate the California Energy Commission's ("CEC") energy efficiency guidelines, resulting in a reduction of energy consumption to the previous Title 24 Building Standards. Due to the Project design, construction, and the nature of operational energy use, the Project would not conflict or obstruct a State or local plan for renewable energy or energy efficiency. Therefore, the Project would result in a less than significant impact on energy.

Mitigation Measures:

None required.

3.3.7 Geology and Soils

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VII. Geology and Soils. Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map, issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☑	☐
ii) Strong seismic ground shaking?	☐	☐	☑	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☑	☐
iv) Landslides?	☐	☐	☐	☑
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☑	☐

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☑	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☑	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☑
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☑	☐

Environmental Setting:

The Project is located in the seismically active Southern California region, and although various faults are present in the vicinity of the Property, there are no known faults on the Property. NorCal Engineering performed a Geotechnical Engineering Investigation for the Project to evaluate the geotechnical conditions of the Property and to provide recommendations for the proposed development. A copy of the Geotechnical report, dated May 16, 2023, is provided in Appendix B.

Environmental Determination:

a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving:

i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map, issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

Less than Significant Impact. The Project is not located within the Alquist-Priolo Earthquake Fault Zone, and no active or potentially active faults are present within the Property. The nearest fault is the Newport-Inglewood fault located approximately 10 kilometers from the site and is capable of producing a Magnitude 6.9 earthquake. Ground

shaking originating from earthquakes along other active faults in the region is expected to induce lower horizontal accelerations due to smaller anticipated earthquakes and/or greater distances to other faults. Therefore, the potential for surface fault rupture due to faulting is considered low. Nevertheless, the Project is located in the seismically active Southern California region, and various faults are present in the vicinity of the Property. The Project would comply with the most recently adopted California Building Codes ("CBC"), which is contained in CCR, Title 24, Part 2. The CBC includes seismic design criteria to reduce the potential for structural damage. Through compliance with the CBC and any additional site-specific requirements, the Project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving fault rupture. Impacts would be less than significant.

ii. Strong seismic ground shaking?

Less than Significant Impact. The Project is located in the seismically active Southern California region, and various faults are present in the vicinity of the Property. The Project would be required to comply with the BMC, as well as the latest adopted version of the CBC, to ensure that the Project's structures would adequately resist the ground-shaking forces of an earthquake. Therefore, the Project would result in a less than significant impact.

iii. Seismic-related ground failure, including liquefaction?

Less than Significant Impact. The Property is situated within an area of historic occurrence of liquefaction. Liquefaction occurs when pore water pressure builds up in the affected soil layer to a point where a total loss of shear strength may occur during a seismic event, causing the soil to behave as a liquid. Per the Geotechnical Investigation performed for the Project (Appendix B), the potential for liquefaction at the Property is high based upon a historical groundwater depth of about eight feet and a Peak Ground Acceleration of 0.738g. Therefore, the design of the planned foundation will incorporate either a post-tensioned slab design, mat foundation, or a system of shallow wall and column footings connected with concrete grade beams to provide increased stiffness to the foundation system. Standard design and construction techniques would be incorporated pursuant to CBC requirements, minimizing hazards due to liquefaction. Therefore, impacts would be less than significant. It should be noted that all development projects must comply with the CBC requirements and hence pursuant to CEQA, regulatory compliance is not considered mitigation.

iv. Landslides?

No Impact. Landslides typically occur on moderate to steep slopes that are affected by such physical factors as slope height, slope steepness, shear strength, and orientation of weak layers in the underlying geologic units. The Property and surroundings are generally flat, with soils stabilized by development and landscaping. The Property is not within a landslide zone on the California Department of Conservation's California Landslide Inventory Map. Therefore, the Project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides. No impact would occur.

b) Result in substantial soil erosion or the loss of topsoil?

Less than Significant Impact. Soil erosion refers to the process by which soil or earth material is loosened or dissolved and removed from its original location. Erosion can occur by varying processes and may occur in a particular development area where bare soil is exposed to wind or moving water (both rainfall and surface runoff). Construction of the Project could require grading and earth-moving activities that may result in soil erosion or loss of topsoil. Construction activities will comply with SCAQMD Rule 403, *Fugitive Dust*, which requires daily watering of unpaved areas to stabilize soil and prevent wind erosion events. BMC section § 13.20.120 Control of Pollutants from Construction Activities Requiring General Construction Activity Stormwater Permit requires that construction activities that result in a disturbance of less than one acre of soil needs to implement Best Management Practices ("BMP") prescribed by the City. Through compliance with applicable regulations, the potential for erosion would be reduced. Ergo, the Project would not result in substantial soil erosion or the loss of topsoil. Therefore, the Project would result in a less than significant impact.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Less than Significant Impact. The Project would not be located on soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse. The Project would be required to comply with the BMC, as well as the latest adopted version of the CBC, to ensure potential impacts related to soil erosion, landslide, lateral spreading, subsidence, liquefaction, or collapse would be less than significant. Therefore, the Project would result in a less than significant impact.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Less than Significant Impact. 2022 CBC section 1803.5.3 defines expansive soil as soil with expansion index (El) of greater than 20. A significant impact would occur if the Project would be built on expansive soil without proper site preparation or design features to provide adequate foundations for Project buildings, thus posing a hazard to life and property. Expansive soils have relatively high clay mineral; they expand with the addition of water and, conversely, shrink when dried, which can cause damage to overlying structures. Per the Geotechnical Investigation performed for the Project (Appendix B), the upper on-site soils are very low in expansion potential (El 0-20). The Expansive Soil Guidelines attached to the Geotechnical report will be reviewed by the engineers, architects, owner, maintenance personnel and other interested parties and considered during the design of the project and future property maintenance. Should site grading result in areas underlain with expansive soils, foundation systems constructed within the influence of detrimentally expansive soils will require specific design to resist expansive soil effects, per sections 1808.6.1 or 1808.6.2 of the 2022 CBC, and will be reviewed by the Project's structural engineer. Through conformance with City/CBC seismic design regulations, standards, and policies, the potential for the Project to be located on expansive

soil, and thus creating substantial risks to life or property, is considered less than significant.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

No Impact. A project would have a significant impact if adequate wastewater disposal were unavailable. The Property is vacant and located in an area served by existing sewage infrastructure. The Project's wastewater demand would be accommodated by connections to existing wastewater infrastructure. As such, the Project would not require the use of septic tanks or alternative wastewater disposal systems. Therefore, no impact would occur.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?

Less than Significant Impact. Pleistocene or older (older than 11,000 years) continental sedimentary deposits have high potential to contain paleontological resources. Holocene-age deposits (less than 10,000 years old) are generally considered to have a low paleontological potential because they are geologically immature and are unlikely to have fossilized the remains of organisms. Although there exists a potential to encounter previously unreported subsurface paleontological resources during excavation for building foundations and pipelines, since the Property was once occupied by a commercial development, the probability of finding paleontological resources is low. Therefore, the Project would not directly or indirectly destroy a unique paleontological resource or site, nor a unique geologic feature. Impacts would be less than significant

Mitigation Measures:

None required.

3.3.8 Greenhouse Gas Emissions

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VIII. Greenhouse Gas Emissions. Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☑	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☑	☐

Environmental Setting:

Gases that trap heat in the atmosphere are referred to as GHGs because they capture heat radiated from the sun, much like a greenhouse does. The accumulation of GHGs has been implicated as the driving force for global climate change. The primary GHGs are carbon dioxide ("CO_2"), methane ("CH_4"), nitrous oxide ("N_2O"), ozone, and water vapor.

While the presence of the primary GHGs in the atmosphere is naturally occurring, CO_2, CH_4, and N_2O are also emitted from human activities, accelerating the rate at which these compounds occur within Earth's atmosphere. Emissions of CO_2 are largely byproducts of fossil fuel combustion, whereas methane results from off-gassing associated with agricultural practices and landfills. Other GHGs include hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride, which are generated in certain industrial processes. Refrigerants ("R") can also be emitted and act as ozone-depleting substances.

CO_2 is the reference gas for climate change because it is the predominant GHG emitted. The effect that each of the aforementioned gases can have on global warming is a combination of the mass of their emissions and their global warming potential ("GWP"). GWP indicates, on a pound-for-pound basis, how much a gas is predicted to contribute to global warming relative to how much warming would be predicted to be caused by the same mass of CO_2. CH_4 and N_2O are substantially more potent GHGs than CO_2, with GWPs of 25 and 310 times that of CO_2, respectively.

In emissions inventories, GHG emissions are typically reported in terms of pounds or metric tons ("MT") of CO_2 equivalent ("CO_2e") per year. CO_2e is calculated as the product of the mass emitted of a given GHG and its specific GWP. While CH_4 and N_2O have much higher GWPs than CO_2, CO_2 is emitted in such vastly higher quantities that it accounts for the majority of GHG emissions in CO_2e.

There is international scientific consensus that human-caused increases in GHG emissions have and will continue to contribute to global warming. Potential global warming impacts in California may include, but are not limited to, loss in snowpack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years. Secondary effects are likely to include a global rise in sea level, impacts on agriculture, changes in disease vectors, and changes in habitat and biodiversity (California Environmental Protection Agency ["CalEPA"], 2006).

Regulatory Setting:

In order to reduce GHG emissions, California enacted Assembly Bill ("AB") 32, the California Global Warming Solutions Act of 2006. AB 32 is a California State Law that fights global warming by establishing a comprehensive program to reduce GHG emissions from all sources throughout the State. According to the CARB, AB 32 was the first program in the country to take a comprehensive, long-term approach to addressing climate change. By requiring a sharp reduction of GHG emissions by law, California set the stage for its transition to a sustainable, low-carbon future. Numerous other federal, State, and local legislation, goals, and policies have been adopted to reduce air pollution and greenhouse gas emissions.

The City adopted the Bellflower Climate Action Plan (Bellflower 2012) to provide guidance on climate action planning within the City. A greenhouse gas emissions inventory had been prepared for the City, as well as Climate Action Strategies, to reduce emissions from buildings, urban form and mobility, and government operations, as well as preparation for climate change. The CAP also provides development review procedures for land use development projects, subject to the disclosure requirements of CEQA.

Environmental Determination:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Less Than Significant Impact. Greenhouse gas emissions resulting from the Project occur during both the construction and operations phases. The primary contributors to GHG emissions during construction are the internal combustion engines used in construction equipment, on-road construction vehicles, and workers' commuting vehicles. These emissions were quantified using the CalEEMod model. Furthermore, these emissions are amortized over the assumed 30-year life of the Project.

GHG emissions for the Project were calculated with CalEEMod, which is the Statewide land use emissions computer model designed to quantify potential criteria pollutant and GHG emissions associated with both construction and operations from land use projects. Appendix A contains the modeling output, including details of the air quality and GHG modeling.

For the operation of the Project, GHG emissions are primarily associated with Project-related vehicle trips, electricity and natural gas usage, water conveyance, and solid waste disposal. CalEEMod also includes a calculation of refrigerant ("R") emissions associated with heating and cooling systems. Table 3-10 shows the calculated GHG emissions based on CalEEMod (see Appendix A).

Table 3-10: Greenhouse Gas Emissions Summary and Significance Evaluation

GHGs	Construction Emissions[a] (MT/Year)	Operations Emissions[a] (MT/Year)	Total Project Emissions[a] (MT/Year)	Threshold[b] (MT/yr)	Significant?
CO_2	2	138	140	—	—
CH_4	<1	<1	<1	—	—
N_2O	<1	<1	<1	—	—
R	<1	<1	<1	—	—
CO_2e	2	146	148	10,000	No

Notes:

a. Construction and operation emissions from CalEEMod version 2022.1.1.24. Construction emissions are amortized over 30 years and added to annual operation emissions.

b. SCAQMD 2023.

The development review process for land use development projects has three primary compliance paths to demonstrate consistency with the CAP. These compliance paths are described below:

- Ministerial and exempt projects;
- Projects that apply a combination City's Climate-Ready Development Standards; and
- Projects that apply a set of custom GHG mitigation measures.

With regards to Path 1, the Project does not qualify as ministerial or exempt. For Path 2, the City designed a point-based menu system that reflects the general effectiveness of each measure at reducing GHG emissions. If a project achieves 16 points, no fees are necessary related to offsetting GHG emissions attributable to the Project. The Applicant has identified the following Climate-Ready Development Standards that will be incorporated into the Project. Because the Project will achieve the 16 points for Climate-Ready Development Standards, the development of the Project is consistent with the implementation guidelines established in the City's CAP and will not generate substantial GHGs that may have a significant impact on the environment.

Table 3-11: Climate-Ready Development Standards

Climate-Ready Development Standards	Project Details	Points
10. Provide continuous rows of appropriately spaced trees (every 25 feet) along all streets (or an equivalent number of trees placed off-site at the discretion of the Planning Director). Trees shall be of a type and nature that have broad canopies and provide ample shade. Evergreen trees are preferred. Palm trees shall be prohibited from consideration towards achieving this standard.	Approximately 450' of linear street frontage requires 18 trees to meet standard. 29 trees are proposed which exceeds the requirements of this Development Standard.	2
11. If a facade faces a street or sidewalk, 30% or greater of its continuous length shall not be blank (without windows and doors). Walls with public art installations such as murals may be exempted.	All street-facing frontages are at least 30% non-blank which meets the requirements of this Development Standard.	2
16. Provide visitor bicycle racks on-site with at least one bicycle space per 10,000 square feet of new-non-retail space or 5,000 square feet of retail space but not fewer than four bicycle spaces per building or 1 space per business (whichever is greater).	2 spaces provided which meets the requirements of this Development Standard.	2
18. Provide at least one on-site shower with changing facility for any development with 100 or more new workers and at least one additional on-site shower with changing facility for every 150 new workers thereafter.	2 showers would be provided which meets the requirements of this Development Standard.	2

Climate-Ready Development Standards	Project Details	Points
20. Provide at least one tree per 500 square feet of building area. Trees shall be of a type and nature that have broad canopies and provide ample shade. Evergreen trees are preferred. Palm trees shall be prohibited from consideration towards achieving this standard.	13,158 square feet of development divided by 500 results in 27 trees required to meet standard. 29 trees proposed which meets the requirements of this Development Standard.	2
22. Minimize the number of driveway cuts that intersect with sidewalks and other pedestrian walkways.	No sidewalk cuts are proposed for the Project.	1
24. Construct sidewalks on both sides of streets (except where the BMC exempts such) for frontage controlled by the Project applicant that is contiguous to the Pxroject site.	Sidewalk construction is proposed.	1
27. Locate the majority entry points to new buildings within a ¼ mile of a transit stop.	Building entrances are located within ¼ mile of nearest transit stop both to the north and south of the Property.	1
29. Provide designated space, facilities, and services for users to recycle and compost waste.	The Project will provide designated space, facilities, and services for users to recycle and compost waste.	1
30. Use only high efficiency lighting.	High efficiency lighting will be installed per California Title 24 energy standards.	1
32. Design landscaping for very-low water use.	Very-low water use landscape irrigation systems will be installed per the requirements of the CalGreen Building Code's Model Water Efficient Landscape Ordinance.	1
Total Points		**16**

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less Than Significant Impact. With the passage of AB 32, the Global Warming Solutions Act of 2006, jurisdictions are required to reduce their GHG emissions to 1990 levels by 2020, as well as comply with other post-2020 reduction targets. As discussed previously, the City adopted its CAP under Resolution No. 12-67 and has fulfilled the public disclosure and analysis requirements required under CEQA. The City's CAP ensures that development of new land uses include high energy-efficiency standards such as use of renewable energy source and management of facilities to reduce emissions due to the use of electricity and natural gas.

The Project would be designed and operated in accordance with the applicable CBC Title 24 regulations and the latest energy code standards, which impose energy and water conservation measures. The majority of the energy usage in the Project would consist of lighting and climate control. Adherence to the aforementioned energy requirements will ensure conformance with the State's goal of promoting energy and lighting efficiency. As discussed above, the Project would include the required Climate-Ready Development Standards and, consequently, would be consistent with the City's CAP, policies, and regulations adopted for the purpose of reducing the emissions of GHGs, which in concert with AB 32 and SB 32, reflect specific local requirements that would substantially lessen cumulative GHG emissions impacts. Ergo, the Project would be considered consistent with the City's Development Review within the CAP.

On September 3, 2020, the Regional Council of SCAG formally adopted the 2020–2045 RTP/SCS as a regional growth management strategy, which targets per capita GHG reduction from passenger vehicles and light-duty trucks in the Southern California Region pursuant SB 375. In addition to demonstrating the region's ability to attain the GHG emission-reduction targets set forth by CARB, the 2020–2045 RTP/SCS outlines a series of actions and strategies for integrating the transportation network with an overall land use pattern that responds to projected growth, housing needs, changing demographics, and transportation demands. Thus, successful implementation of the 2020–2045 RTP/SCS would result in more complete communities with various transportation and housing choices while reducing automobile use.

The primary objective of the RTP/SCS is to provide guidance for future regional growth (i.e., the location of new residential and non-residential land uses) and transportation patterns throughout the region, as stipulated under SB 375. Given that the Project involves constructing offices and storage warehouse buildings, the Project would not result in substantial direct or indirect population growth in the City. Accordingly, the Project would not conflict with the goals and policies of the RTP/SCS.

Thus, the Project would result in a less than significant impact from GHG emissions.

Mitigation Measures:

None required.

3.3.9 Hazards and Hazardous Materials

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IX. Hazards and Hazardous Materials. Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☑	☐

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☑	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☑	☐
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☑
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☑
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☑	☐
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☐	☑

Environmental Setting:

As defined in section 25117 of the California Health and Safety Code, a hazardous material is any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health or the environment if released into the workplace or the environment. Hazardous substances can take the form of a solid, dust, liquid, or fume, and they may exhibit any of the criteria set

forth in 22 CCR Chapter 30, Article 11. A list of wastes that are presumed hazardous is presented in 22 CCR Chapter 30, Article 9. Hazardous waste criteria include toxicity, ignitability, reactivity, and corrosivity.

The California Department of Toxic Substances Control ("DTSC") maintains a database (EnviroStor) that provides access to detailed information on hazardous waste permitted sites and corrective action facilities, as well as existing site cleanup information. EnviroStor also provides information on investigation, cleanup, permitting, and/or corrective actions that are planned, being conducted, or have been completed under the DTSC's oversight. A review of EnviroStor did not identify any records of hazardous waste facilities on the Property.

Environmental Determination:

a) Create significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Less Than Significant Impact. A significant impact would occur if the Project would create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Construction of the Project would involve transport, use, and disposal of hazardous materials, including paints, solvents, oils, grease, caulking, and small quantities of fuels. During construction, equipment would require refueling and potential minor maintenance on-site that could lead to fuel and oil spills. The contractor would be subject to laws relating to the handling, storage, and use of hazardous materials during construction, as per the CCR, Title 22, Division 4.5.

Operation of the Project would require routine maintenance, which may involve transport, use, or disposal of hazardous materials, such as diesel fuel and paint. However, no industrial uses or activities are proposed that would result in the use or discharge of unregulated hazardous materials and/or substances, or create a public hazard through transport, use, or disposal. The Project would not store hazardous materials during operations.

The use and handling of hazardous materials during construction activities and long-term operation of the Project would occur in accordance with applicable Federal, State, and local laws, including the California Division of Occupational Safety and Health ("Cal/OSHA") and DTSC requirements. Thus, impacts would be less than significant.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Less Than Significant Impact. During construction of the Project, the use of hazardous substances would be limited in nature and subject to standard handling and storage of equipment. Although highly unlikely, the release of hazardous materials could occur during construction on any project. Any such release would most likely be minor spillages of motor vehicle fuels and oils. The Project would implement BMPs during construction to avoid spills, immediately respond to any spills, and minimize the effects of such spills. The use and handling of chemicals would occur in accordance with applicable federal, State, and local laws, including Cal/OSHA requirements. Therefore, during construction,

it is highly unlikely that the release of hazardous materials at a level that would present a hazard to the environment or to human or animal life would occur.

Operation of the Project would require routine maintenance, which may involve transport, use, or disposal of hazardous materials such as diesel fuel and paint. The Project would not store hazardous materials during operations. The use and handling of chemicals during operations of the Project would also comply with applicable federal, State, and local laws, including Cal/OSHA requirements. Therefore, the Project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Thus, the Project would result in a less than significant impact.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Less Than Significant Impact. There are three existing schools (Las Flores Home Education, Valley Christian Elementary School, and Thomas Jefferson Elementary School) within 0.5 miles of the Project. Transport of hazardous substances or materials to and from the Property during construction and long-term operational maintenance activities would be required to comply with applicable federal, State, and local regulations to preclude substantial public safety hazards. Accordingly, there would be no potential for existing or proposed schools to be exposed to substantial safety hazards associated with the routine transport of hazardous substances or materials to and from the Property. Therefore, the potential to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste to schools near the Property is less than significant.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code 65962.5 and as a result, would it create a significant hazard to the public or the environment?

No Impact. The DTSC and State Water Resources Control Board ("SWRCB") compile and update lists of hazardous material sites pursuant to Government Code section 65962.5. The subject property is not included in the databases maintained by the DTSC's EnviroStor or in the SWRCB Geotracker. Additionally, adjoining properties and other facilities within 1 mile of the subject property were reviewed in the environmental database report and were not found to be an environmental concern to the subject property. Therefore, the Project would not have an impact due to being on a contaminated site.

e) For a project located within an airport land use plan or where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

No Impact. There is no public or private use airport within 2 miles of the Property. The nearest airport is the Long Beach Airport, which is located approximately 4 miles to the southwest of the Property. Therefore, no impacts regarding safety hazards or excessive noise for people residing or working in the Project area would occur.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less than Significant Impact. According to the Safety Element of the Bellflower General Plan, the City has an Emergency Operations Plan that is utilized during extraordinary emergency situations associated with natural disasters, technological incidents, and human-caused events. Construction activities have potential to result in short-term, temporary impacts on surrounding roadways, from partial lane closures or the presence of construction vehicles, which may cause temporary traffic slowdown. Ongoing coordination with the local fire and police departments during construction would ensure that potential interference with emergency response and evacuation efforts are avoided. Once operational, the future developments are not anticipated to generate substantial vehicle trips. In addition, the design for the Project would be reviewed by the Los Angeles County Fire Department to ensure that adequate emergency access is provided throughout construction and operation. Therefore, the Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Impacts would be less than significant.

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

No Impact. The Project is not located within a Local Responsibility Area ("LRA") classified by the California Department of Forestry and Fire Protection ("CAL FIRE") or Los Angeles County as a high fire hazard severity zone. The Bellflower Fire Department is responsible for emergency response and fire prevention through implementation of fire prevention programs, including inspections, code enforcement, and public education to reduce fire risks for the City. Therefore, the Project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires. No impact would occur.

Mitigation Measures:

None required.

3.3.10 Hydrology and Water Quality

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
X. Hydrology and Water Quality. Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☑	☐

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☑	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	☐	☐	☑	☐
i) result in a substantial erosion or siltation on- or off-site;				
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;				
iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or				
iv) impede or redirect flood flows?				
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☑
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☑	☐

Environmental Setting:

Storm water runoff from disturbed soils associated with construction activities is a common source of pollutants (mainly sediment) to receiving waters. Earthwork activities can loosen soils and sediments, making them more susceptible to erosion from storm water runoff and increasing the likelihood that these materials would migrate in storm water runoff to storm drains and downstream water bodies. In addition, construction would likely involve the use of various materials typically associated with construction activities such as paint, solvents, oil and grease, petroleum hydrocarbons, concrete, and associated concrete wash-out areas. If improperly handled, these materials could result in pollutants being

mobilized and transported off-site by storm water runoff (non-point source pollution) and degrade receiving water quality. During operations of the Project, there is the potential of generating surface water pollutants.

Environmental Determination:

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Less Than Significant Impact. Construction activities could result in soil erosion and loss of topsoil, which could then affect water quality. However, the Project would be required to comply with all existing regulations that ensure protection of water quality standards. While the Project could result in additional impervious surfaces, the Project would be required to comply with all applicable regulations related to drainage and storm water discharge. Further, the Project must comply with the Planning and Land Development Program requirements described in LARWQCB Order No R4-2012-0175 (NPDES Permit No. CAS004001), Waste Discharge Requirements for Municipal Separate Storm Sewer System Discharges Within the Coast Watersheds of Los Angeles County, Except Those Discharges Originating from the City of Long Beach Municipal Separate Storm Sewer System ("MS4") (Los Angeles County MS4 Permit – modified July 2018) (LARWQCB 2012). The Los Angeles County MS4 Permit requires implementation of post-construction BMPs that would reduce storm water pollution. As such, due to compliance with existing construction and post-construction regulations, impacts would be less than significant.

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Less Than Significant Impact. The Project is located within the Coastal Plain of Los Angeles Groundwater Basin ("Central Basin"). The Central Basin is a high-priority basin under the Sustainable Groundwater Management Act ("SGMA"), which requires that all basins designated as high or medium priority by the Department of Water Resources ("DWR") form a groundwater sustainability agency ("GSA") to prepare and submit a groundwater sustainability plan, or alternatively, directly submit an analysis, in lieu of forming a GSA. The Water Replenishment District of Southern California ("WRD") submitted an alternative analysis on the basin condition that demonstrates that the basin has operated within a sustainable yield over a period of at least 10 years.

The Project would be served by the Bellflower Somerset Mutual Water Company ("BSMWC") and would not include installation of groundwater wells or long-term direct groundwater extraction. The Project would not significantly decrease groundwater supplies. Therefore, impacts would be less than significant.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i. result in a substantial erosion or situation on- or off-site;

ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; and

iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or

iv. Impede or redirect flood flows?

Less than Significant Impact. The closest river to the Project is the San Gabriel River, approximately 0.6 miles east of the Property. The Project would not result in the alteration of the San Gabriel River.

The Project would be required to comply with existing regulations regarding drainage and pollutant discharge. The Property was once occupied by a commercial development that was later completely demolished. The Project would not introduce substantial additional impervious surfaces and any erosion or siltation impacts that might result from construction and grading activities would be prevented through erosion and sediment control BMPs. Therefore, the Project would not significantly alter the existing drainage pattern.

Through compliance with existing regulations, the Project would not result in substantial erosion or siltation on- or off-site. Impacts would be less than significant.

On-site runoff would be conveyed to catch basins and storm drains located along City streets and drainage patterns would not be significantly altered with implementation of the Project. Thus, the Project would not substantially increase the rate or amount of runoff in a manner which would result in flooding on- or off-site. Impacts would be less than significant.

The Project would not create or contribute runoff water, which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff. Impacts would be less than significant.

Because the Project would be required to comply with all applicable regulations regarding drainage and discharge to the area, the Project would not significantly alter the existing drainage pattern in a way that would impede or redirect flood flows. Thus, impacts would be less than significant.

d) In flood hazard, tsunami or seiche zones, risk release of pollutants due to project inundation?

No Impact. According to maps provided by the Federal Emergency Management Agency, the Project is located within Zone X, which is outside of the 100-year flood zone area. The Project is not located within a tsunami hazard inundation zone and is not in an area subject to current or projected future coastal flooding. A seiche is caused by oscillation of the surface of a large enclosed or semi-enclosed body of water due to an earthquake or large wind event. The Project is not located near a large enclosed or semi-enclosed body of water. The Project would not result in an increase in flood risk at the Property. Therefore, there would be no impact.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Less Than Significant Impact. The Project is located within the Los Angeles Region Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties ("Basin Plan"), which is designed to preserve and enhance water quality, as well as protect the beneficial uses of all regional waters. The Project would be subject to all applicable rules and regulations regarding drainage and discharge. The Project would not result in significant alteration of the existing drainage pattern. The Project will comply with the Planning and Land Development Program requirements described in LARWQCB Order No R4-2012-0175 (NPDES Permit No. CAS004001), Waste Discharge Requirements for Municipal Separate Storm Sewer System Discharges Within the Coast Watersheds of Los Angeles County, Except Those Discharges Originating from the City of Long Beach Municipal Separate Storm Sewer System ("MS4") (Los Angeles County MS4 Permit – modified July 2018) (LARWQCB 2012). The Project would not affect the water quality in the San Gabriel River or conflict with or obstruct the objectives of the Basin Plan. Impacts would be less than significant.

Mitigation Measures:

None required.

3.3.11 Land Use and Planning

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XI. Land Use and Planning. Would the project:				
a) Physically divide an established community?	☐	☐	☑	☐
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☑	☐

Environmental Determination:

a) Physically divide an established community?

Less Than Significant Impact. A significant impact would occur if the Project would be sufficiently large or configured in such a way so as to create a physical barrier within an established community. A physical division of an established community is caused by an impediment to through travel or a physical barrier, such as a new freeway with limited access between neighborhoods on either side of the freeway, or major street closures. The Project would not involve any street vacation or closure or result in development of new thoroughfares or highways. The Property is currently zoned as M-1 (Light Industrial) land use. DR approval by the Planning Commission is required to allow for the proposed design. Planning Commission approval is also required for a variance from the setback and fence height requirements of the BMC. Upon the approval of the DR and variance, all potential impacts would be less than significant.

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Less Than Significant Impact. As stated above, the Project does not comply with some of the development standards of the M-1 Zone. DR approval by the Planning Commission is required to allow for the proposed design. Planning Commission approval is also required for a variance from the setback and fence height requirements of the BMC. Upon the approval of the DR and variance, all potential impacts would be less than significant.

Mitigation Measures:

None required.

3.3.12 Mineral Resources

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XII. Mineral Resources. Would the project:				
a) Result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state?	☐	☐	☐	☑
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☑

Environmental Determination:

a) Result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state?

No Impact. The City is highly urbanized. No mineral resources are known to occur in or around the Property. Therefore, the Project would not have an impact on mineral resources.

b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

No Impact. The General Plan Conservation Element does not identify any areas known to produce oil, natural gas, aggregate, or mineral deposits. No valuable mineral resources are known to exist within the City. Therefore, the Project would not result in the loss of availability of a known mineral resource. No impact would occur.

Mitigation Measures:

None required.

3.3.13 Noise

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIII. Noise. Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☑	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☑	☐
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☑

Environmental Setting:

Noise is typically described as any dissonant, unwanted, or objectionable sound. Sound is technically described in terms of the loudness (amplitude) and frequency (pitch) of the sound. The standard unit of measurement of the loudness of sound is the decibel ("dB"). Because the human ear is not equally sensitive to sound at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity, the A-weighted decibel scale ("dBA"). In most situations, a 3-dBA change in sound pressure is considered a "just detectable" difference in outdoor environments. A 5-dBA change (either louder or quieter) is readily noticeable, and a 10-dBA change is a doubling (if louder) or halving (if quieter) of the subjective loudness. Sound from a small, localized source (i.e., a "point" source) radiates uniformly outward as it travels away from the source in a spherical pattern. The sound level attenuates (drops off) at a rate of 6 dBA for each doubling of the distance. Whereas sound from roadway traffic emanates in a cylindrical pattern and has an attenuate rate of 3 dBA per doubling of distance.

The duration of noise, and the time period at which it occurs, are important factors in determining the impact of noise on sensitive receptors. A single number called the

equivalent continuous sound pressure level ("L_{eq}") may be used to describe sound that is changing in level. The maximum ("L_{max}") and minimum ("L_{min}") noise metrics describe the highest and lowest measured values.

In determining the daily measure of community noise, it is important to account for the difference in human response to daytime and nighttime noise. Noise is more disturbing at night than during the day, and noise indices have been developed to account for the varying duration of noise events over time, as well as community response to them. The Community Noise Equivalent Level ("CNEL") adds a 5-dB penalty to the "evening" hourly noise levels (7 p.m. to 10 p.m.), and a 10-dB penalty to nighttime noise (10 p.m. to 7 a.m.). This adjustment is similar to the Day-Night Average Noise Level ("L_{dn}"), which adds a 10-dB penalty to the nighttime hours without accounting for a penalty for the evening hours (California Department of Transportation ["Caltrans"] 2013).

Regulatory Setting:

The City's General Plan (Bellflower 1994), Noise Element contains criteria to determine the compatibility of proposed developments. For industrial land uses, an L_{dn} or CNEL limit (threshold) of 75 dBA is considered "Normally Acceptable," and CNEL of 70-80 dBA is considered "Conditionally Acceptable."

For this Project, the BMC establishes numerous ordinances to limit noise exposure. The following are the codes that apply to the Project:

Section 8.32.010.B: Any unreasonable noise level caused by such use or operation which is audible to the human ear at a distance in excess of 200 feet from the property line of a noise source, which is within any residential area or zone of the City or within 500 feet of any residential zone, shall be a violation of the provisions of this chapter. "Residential area" as used herein shall mean property zoned or used for residential purposes.

Section 8.32.010.C: Notwithstanding any other provisions of this Code and in addition thereto, it is unlawful for any person to willfully make or continue, or cause to be made or continued, any loud, unnecessary, and unusual noise which disturbs the peace or quiet of any neighborhood, or which causes discomfort or annoyance to any reasonable person of normal sensitiveness, residing in the area. The standards which may be considered in determining whether a violation of the provisions of this section exists may include, but not be limited to, the following:

- The level of the noise;
- Whether the nature of the noise is usual or unusual;
- Whether the origin of the noise is natural or unnatural;
- The level and intensity of the background noise, if any;
- The proximity of the noise to residential sleeping facilities;
- The nature and zoning of the area within which the noise emanates;
- The density of the inhabitation of the area within which the noise emanates;
- The time of the day and/or night the noise occurs;
- The duration of the noise;

- Whether the noise is recurrent, intermittent, or constant; and
- Whether the noise is produced by a commercial or noncommercial activity.

(Prior code § 3-3.2)

Section 17.52.130 Mechanical Equipment: Each such lot which has compressors, air conditioning units or similar machinery located outside of the exterior walls of any building shall comply with the following:

- All such mechanical equipment shall be enclosed within a permanent sound-proofed enclosure subject to the approval of the building inspector. Location shall be subject to the approval of the planner.
- All such mechanical equipment shall be maintained in a clean and proper condition to prevent a collection of litter and filth and to avoid the emission of unnecessary noise, dust, or fumes.
- All ground-mounted mechanical equipment shall be completely screened behind a permanent structure, and all rooftop mechanical equipment shall be screened from view, from the ground surface from a distance of 100 feet. Screening methods shall be architecturally compatible with the main building.

(Prior code § 19-12.4(j); Ord. 1247 § 3, 8/12/13; Ord. 1404 § 5, 12/14/20)

Section 17.52.170 Limitations Upon External Effects: The following limitations shall be imposed upon external effects of any use permitted in the M-1 District:

- *Noise.* No use shall be permitted which creates a sound level beyond the boundaries of the site in excess of 45 decibels. Sound level shall be measured with an instrument which is in accordance with the American Standard for Sound Level Meters, Z 24.3, and response Curve "A" given in this Standard shall be used.
- *Vibration, Heat, Glare, Electrical Disturbance.* No use shall be permitted which creates vibration, heat, glare, or electrical disturbance beyond the boundaries of the site.

Environmental Determination:

a) Generation of substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies?

Less Than Significant Impact.

Construction Noise Analysis:

The Project includes the development of office and warehouse buildings, as well as a parking lot. The majority of noise would occur during the site preparation, grading, and building construction when heavy equipment would be operating. Temporary construction noise would be limited to daylight hours and would permanently cease upon completion of construction. The Property is adjacent to industrial uses, to the west, and across Woodruff Avenue, to the east. Commercial uses are located to the south across Artesia Place, and the Artesia freeway is located to the north of the Property The nearest noise-sensitive uses are residences, located approximately 120 feet to the west of the Property. Noise generated by Project-related activities would be substantially attenuated by a 20-foot concrete

masonry building that is located between the Property and these residential uses. In addition, noise generated by the Artesia freeway would assist in masking noise generated by the construction activities. Lastly, the City limits noise generation by construction activities to the least noise sensitive portions of the day. For these reasons, the Project's construction activities would not result in a substantial temporary increase in ambient noise levels and impacts would be less than significant.

Operational Noise:

Upon completion of construction and occupancy of the Project, on-site operational noise would be generated mainly by service activities, Heating, Ventilation, and Air Conditioning ("HVAC") equipment, and intermittent vehicle trips by employee trips and service. As discussed previously, section 17.52.130 Mechanical Equipment and section 17.52.170 Limitations Upon External Effects limits noise generation by both the service activities occurring by uses within an area with M-1 Light Industrial zoning. The noise limit established by the City of 45 dBA is stringent and would be substantially less than existing ambient conditions, especially with noise produced from the Artesia freeway.

Noise produced by parking lot activities and Project-related vehicle trips would also generate noise. A total of 14 employees are estimated and 25 parking spaces is proposed to accommodate the new employees and visitors. The up to 25 vehicle trips occurring at any given time would not result in a substantial change in ambient noise levels along Woodruff Avenue, due to the large volume of traffic traveling along that roadway, as well as the noise generated by the Artesia freeway. As such, traffic noise associated with the Project would result in less than significant impacts.

b) Generation of excessive groundborne vibration or groundborne noise levels?

Less Than Significant Impact. Although there will be some excavation in typical soil for the Property, construction plans do not include intense percussive actions (e.g., hard rock-breaking, impact pile-driving). Therefore, no strong ground-borne vibrations are expected to be generated that could substantially affect nearby structures or be noticeable to their occupants. For the operations phase of the Project, the proposed office and warehouse building do not involve machinery or process which involve the generation of substantial levels of vibration. In addition, section 17.52.170.B. Limitations Upon External Effects limits vibration to the property line. Therefore, the Project would have a less than significant impact with regards to ground-borne vibration and noise levels.

c) For a project located within the vicinity of a private airstrip or an airport land use plan or where such a plan has not been adopted within two miles of a public airport or public use airport would the project expose people residing or working in the project area to excessive noise level?

No Impact. There is no public or private use airport within 2 miles of the Property. The nearest airport is the Long Beach Airport, which is located approximately 4 miles to the southwest of the Property. Aircraft overflights at the Property do not substantially affect the noise environment at the Property. Therefore, the Project would not expose the Project's employees or customers to excessive aircraft noise exposure.

Mitigation Measures:

None required.

3.3.14 Population and Housing

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIV. Population and Housing. Would the project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☑
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☑

Environmental Determination:

a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

No Impact. According to the City's Department of Planning and Building Services' website, "The City contains 6.14 square miles. Of the City's area, 67 percent (2,050 acres) is zoned for residential uses, 13 percent (403 acres) is zoned for commercial uses, and 4 percent (110 acres) is zoned for light industrial uses. In this predominantly residential city, there are currently 25,073 housing units occupied by a population of 76,616 persons (2010 US Census)." (Bellflower 2024b). Due to the small scale of development of the Project, which includes five enclosed offices and three cubicles, the Project would not result in substantial direct or indirect population growth in the City. Therefore, the Project would have no impact.

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

No Impact. The Property is currently undeveloped. As such, it would not displace existing people or housing. Therefore, the Project would have no impact on population and housing.

Mitigation Measures:

None required.

3.3.15 Public Services

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XV. Public Services. Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
Fire protection?	☐	☐	☑	☐
Police protection?	☐	☐	☑	☐
Schools?	☐	☐	☐	☑
Parks?	☐	☐	☐	☑
Other public facilities?	☐	☐	☐	☑

Environmental Setting:

Fire Protection: Fire protection within the City is provided by Los Angeles County Fire Station 23 and Los Angeles County Fire Station 98. They provide Emergency Medical Services ("EMS"), fire and rescue services, and safe haven services for unincorporated Los Angeles County and contract cities. Los Angeles County Fire Station 23 is approximately half-a-mile away, and the Los Angeles County Fire Station 98 is approximately 1 mile away from the Property.

Police Protection: Police service in the City is provided by the Los Angeles County Sheriff's Department – Bellflower substation. This substation serves the City of Artesia, City of Bellflower, City of Hawaiian Gardens, City of Lakewood, City of Paramount, Unincorporated Cerritos, and Unincorporated Long Beach. The substation is located at 16615 Bellflower Boulevard, Bellflower, CA, 90706. The Bellflower Sheriff's Department is located approximately half-a-mile northwest of the Property.

School Services: The Bellflower Unified School District provides education to students in Bellflower, California. The District provides education to students at 11 elementary schools, 3 high schools, and 1 independent study academy. There are close to 10,000 students enrolled in prekindergarten through the 12th grade (BUSD 2024).

Parks: The City is served by three parks – Caruthers Park, Simms Park, and Thompson Park. These parks offer recreational classes and outdoor activities. Each of these parks are located approximately half-a-mile from the Property.

Other Public Facilities: The Clifton M. Brakensiek Library has served the community of Bellflower for more than 100 years. The first branch was opened on March 11, 1914 and has moved four times until its present location. The library was named after Clifton M. Brakensiek, MD, who donated the land on which the library is built.

Environmental Determination:

a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:

Fire Protection:

Less Than Significant Impact. Construction of the Project would have a low fire hazard due to the materials that would be used for Project design and the use of equipment, electricity, machinery fuel, welding, and other fire sources that may have a potential to create a fire. The operations phase of the Project may involve the use of flammable materials used in the warehouse building.

The Project would comply with applicable City fire prevention and protection requirements, including building/site design requirements, fire flow, and access requirements, as well as provisions for fire protection services, as adopted by the City and the 2022 California Fire Code. There are two fire stations within 1 mile of the Project and response times would be expected to be prompt, when needed. The Project would not affect response times or other performance objectives at the fire department due to the small scale of development and the low fire risk. The Project would provide emergency access to the fire department in the event of an emergency. Additionally, BMC sections establishes Development Fees applicable to all development projects for the purpose of defraying the cost of public facilities (including public improvements, public services, and community amenities) resulting from the increased demand for public facilities reasonably related to the development Project. These fees assist the City in providing necessary public services for existing and proposed land use developments. Therefore, impacts related to fire protection would be less than significant.

Police Protection:

Less Than Significant Impact. The Project would necessitate normal police services required by the rest of the City, when necessary. The police station is approximately a half-mile northwest of the Project, and response times would be expected to be prompt, when needed. Due to the small scale of development, the Project would not affect response times or other performance objectives at the police department. Additionally, BMC sections establishes Development Fees applicable to all development projects for the purpose of defraying the cost of public facilities (including public improvements, public services, and community amenities) resulting from the increased demand for public facilities reasonably related to the development Project. Therefore, impacts related to police protection would be less than significant.

Schools:

No Impact. The Project does not involve the development of residential uses which would have had a direct demand on school facilities. However, there would be a potential for Project-related employees to transfer their children to the local school district. The 14 workers needed for operation of the Project would be low and may also be met from the

primarily residential nature of Bellflower. As such, there would not be a substantial demand for school services attributable to the Project. There are also development fees that would apply to the Project to support local schools. Hence, there would be no impact to schools in the City.

Parks:

No Impact. The number of workers needed for operation of the Project would be low and would likely use park facilities proximate to their place of residence during the weekends. There are also development fees that would apply to the Project to support local parks. Therefore, there would be no impact to parks in the City.

Other Public Facilities:

No Impact. Due to the small scale of development, and the low number of employees associated with the Project, there would be minimal demand for other public facilities. There are also development fees that would apply to the Project to support public facilities within the City and, consequently, there would be no impact on other public facilities in the City.

Mitigation Measures:

None required.

3.3.16 Recreation

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVI. Recreation.				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☑
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☑

Environmental Determination:

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

No Impact. A significant impact may occur if a project would include substantial employment or population growth, which could generate an increased demand for public park facilities that potentially exceeds the capacities of existing parks, causing premature deterioration of the park facilities. The Project will not result in the addition of any new residential units that would potentially lead to increased use of existing neighborhood and regional parks or other recreational facilities. The proposed office and service uses at the Property would not require a significant number of employees (14 estimated), due to the small scale of development and the likelihood that a substantial number of employees would be from local communities. As such, the Project would not substantially increase the use of recreational facilities. In addition, the Project would provide development fees that support the needs of parks and other recreational facilities within the City. Therefore, the Project would have no impact related to substantial physical deterioration on neighborhood and regional parks.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

No Impact. The Project would not include or require the construction or expansion of recreational facilities. The Project involves the construction of office and service facilities and does not include recreational facilities. The Project would not result in the addition of any residential units that may place a greater demand on recreational facilities and would involve a relative small number of employees. These employees would likely use recreational facilities near their residence and, consequently, would not require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment. As such, no impact would occur.

Mitigation Measures:

None required.

3.3.17 Transportation/Traffic

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVII. Transportation/Traffic. Would the project:				
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☑	☐
b) Conflict or be inconsistent with CEQA Guidelines §15064.3, subdivision (b)?	☐	☐	☑	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☑	☐
d) Result in inadequate emergency access?	☐	☐	☑	☐

Environmental Setting:

CEQA Guidelines §15064.3, subdivision (b) outlines the criteria for analyzing transportation impacts under CEQA. The following are the key points used for the determination of potential traffic related impacts:

Land Use Projects: Vehicle Miles Traveled ("VMT") exceeding a certain threshold may indicate a significant impact. Projects close to major transit stops or high-quality transit corridors are generally presumed to have a less significant transportation impact. Conversely, projects that decrease VMT compared to existing conditions are also presumed to have a less significant impact.

Transportation Projects: Projects that reduce or do not affect VMT are presumed to cause a less significant transportation impact. For roadway capacity projects, agencies can determine the appropriate measure of transportation impact consistent with CEQA and other applicable requirements.

Qualitative Analysis: If models or methods to estimate VMT are not available, a qualitative analysis can be conducted. This analysis considers factors like transit availability and proximity to other destinations.

Methodology: Agencies have the discretion to choose the most appropriate methodology to evaluate a project's VMT, whether in absolute terms, per capita, per household, or another measure. This section emphasizes that the most appropriate measure of transportation impacts is generally the amount and distance of automobile travel attributable to a project, known as VMT. It also clarifies that a project's effect on

automobile delay does not constitute a significant environmental impact, except as specified regarding roadway capacity.

Environmental Determination:

a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

No Impact. The Project would result in vehicle trips during construction and operation of the facility. Vehicles associated with construction of the Project would likely use regional and local roadways to access the Property, primarily the Artesia freeway, Woodruff Avenue, and Artesia Boulevard. Vehicle trips would consist of required construction material or equipment deliveries and construction worker trips. With regard to future growth after the Property is developed, SCAG prepared the 2020-2045 RTP/SCS, which provides population, housing, and employment projections for cities under its jurisdiction. The growth projections in the 2020-2045 RTP/SCS are based in part on projections originating under County and City General Plans. Vehicle trips during operation would consist of people using the proposed office and service uses. The Project proposes 25 parking spaces with 14 used by employees and, consequently, would not result in substantial trip generation and employee demand on transit, roadway, bicycle and pedestrian facilities. Due to the low number of employees, and the resulting traffic generation associated with the Project, operation of the Project would not conflict with any program, plan, or policy addressing the circulation system in the City. Therefore, the Project would have no impact related to conflicts with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

b) Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?

No Impact. Project operations would generate a minimal amount of vehicle trips whose employees may be served by residential nature of the City's population or nearby communities. With 14 employees and a proposed 25 parking spaces, the Project would not generate a substantial number of vehicle trips per day, and is also served by the Long Beach Transit 92 bus route, with a bus stop located one block north along Woodruff Avenue. Additionally, the future Bellflower Transit Station at Bellflower Boulevard and Alondra Boulevard is within one mile of the Property. As such, the Project would have no significant impact on issues related VMT.

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

No Impact. The Project would not involve any new hazardous design or features, nor introduce any new uses that would be incompatible with transportation. The Project would not include sharp curves or dangerous intersections. Access to Property would occur along Beverly Street and Artesia Place, which have low levels of vehicle traffic, and would not involve Property ingress and egress to a dangerous intersection. Therefore, the Project would not substantially increase hazards and would result in no impacts.

d) Result in inadequate emergency access?

No Impact. Ingress and egress from the Property would occur along Beverly Street and Artesia Place and would not affect emergency response routes. Since the Project would include a secondary access emergency entrance/exit for the Property, there would be adequate emergency access. Therefore, the Project would result in no significant impacts related to inadequate emergency access.

Mitigation Measures:

None required.

3.3.18 Tribal Cultural Resources

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVIII. Tribal Cultural Resources.				
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code §21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☐	☑	☐
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code §5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☐	☑	☐

Environmental Setting:

The City commenced the AB 52 process for this Project by sending out consultation invitation letters on June 17, 2024 to tribes previously requesting notification pursuant to PRC section 21080.3.1. The tribes notified include Santa Rosa Band of Cahuilla Indians,

Soboba Band of Luiseno Indians, San Gabriel Band of Mission Indians, and Gabrieleno Band of Mission Indians. Vanessa Minott of Santa Rosa Band of Cahuilla Indians did not have any comments; Soboba Band of Luiseno Indians deferred to San Gabriel Band of Mission Indians; and Gabrieleno Band of Mission Indians – Kizh Nation requested to schedule a consultation. A copy of the City's correspondence with the Tribes is included in Appendix C.

On October 16, 2024, City staff consulted with the Chairman and staff members of the Gabrieleno Band of Mission Indians – Kizh Nation to acquire applicable information and discuss any potential concerns as related to the Project. They had no specific concerns about the Project but provided historical information about their tribal government relative to the Bellflower area. The Project would incorporate standard PFs (PF-TCR-1 and 2) into the Project to reduce unanticipated impacts to TCRs.

Environmental Determination:

Would the project cause a substantial adverse change in the significance of a tribal cultural resource defined in Public Resources Code § 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?

Less Than Significant. As discussed in section 3.3.5, the City does not include sites listed on the California Register or NRHP (Bellflower 1994), and no buildings with historical significance are located within the Property. To confirm that Native American resources would not be disturbed, in accordance with AB 52, the City sent letters on June 17, 2024, inviting consultation with applicable Native American Tribal Governments. As previously noted, no tribe requested further information or had specific concerns about the Project. Impacts would be less than significant.

b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code § 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Less Than Significant. In compliance with AB 52, a notice was provided to applicable tribes as identified by the City on June 17, 2024, that a CEQA IS was being prepared and the City and the applicant solicited requests for consultation. No tribe requested further information or had specific concerns about the Project. However, in an abundance of caution and in an effort to protect unknown TCRs, the Project would incorporate standard PFs (PF-TCR-1 and 2) into the Project to address potential TCRs discovered during construction. Impacts would be less than significant.

Project Features:

PF-TCR-1: Before the start of construction, the applicant will notify the tribes of the Project. Arrangements will be made such that the Tribal Monitor may be on-site during all ground-disturbing activities (including, but not limited to, clearing, grubbing, tree and bush removal, grading, trenching, fence post placement and removal, construction excavation, excavation for all utility and irrigation lines, and landscaping). The Tribal Monitor will have the authority to temporarily divert, redirect, or halt the ground-disturbing activities to allow identification, evaluation, and potential recovery of cultural resources.

PF-TCR-2: All archaeological/cultural documents created as a part of the Project (Cultural Resource Management Plan ["CRMP"]), isolate records, site records, survey reports, testing reports, final report, etc.) must be submitted to the Lead Agency and Consulting Tribe(s) for review and comment, if applicable.

Mitigation Measures:

None required.

3.3.19 Utilities and Service Systems

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIX. Utilities and Service Systems. Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☑	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☑	☐
c) Result in a determination by the waste water treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☑	☐

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☑	☐
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☐	☑

Environmental Determination:

a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Less than Significant Impact.

The Project seeks to develop offices and service facilities for the Bellflower Somerset Mutual Water Company which is the water provider for the Property. For potable water, the Project would construct an on-site sanitary sewer lateral to service the property. If a new lateral is proposed from the property to the existing sewer main, the minimum lateral size from main to property line is six inches. The Los Angeles County Sanitation District will be contacted to obtain the necessary connection permits. A separate sewer clean-out will be provided for each building. Water demand would be minor, and water supplies would be provided to the Property by the Project developer.

Documentation confirming that sufficient sewer capacity is provided will be provided to the City's Building Division. The Project would be developed and operated in compliance with the City regulations and standards to ensure wastewater treatment requirements are achieved.

The Project would also be provided natural gas by Southern California Gas Company (SoCalGas), electricity by Southern California Edison (SCE), and telecommunication services (various private services available). Connection to existing services would be consistent with City and purveyor requirements.

The implemented City-approved drainage plan would ensure that post-development storm water discharge rates would not exceed pre-development conditions. The City is responsible for the operation and maintenance of infrastructure within its territorial boundaries, including the storm drain system. The Applicant would pay all applicable development fees, water connection fees, and service fees required by the City and purveyors to connect to existing services. Therefore, Project impacts would be less than significant with respect to utilities.

b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Less than Significant Impact. Water demand would be minor, and water supplies would be provided to the Project by the City. The BSMWC provides water to the Property and fulfills 100% of total water demand for the City. Due to the small scale of the proposed facilities, the Project would not result in changes to the projected groundwater pumping that would decrease groundwater supplies, and the Project would not otherwise impede the sustainable groundwater management of the basin. Therefore, potential impacts associated with sufficient water supplies available to serve the Project and reasonably foreseeable future development would be less than significant, and mitigation is not required.

c) Result in a determination by the waste water treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Less than Significant Impact. The Project would be served by the County of Los Angeles Sanitation District's sewer system. The Los Coyotes Water Reclamation Plant currently provides primary, secondary, and tertiary treatment for a design capacity of 37.5 million gallons of wastewater per day and was last expanded in 1975 (Los Angeles County Sanitation District ["LACSD"] 2024). Due to the small wastewater generation associated with the Project, it will not exceed wastewater treatment requirements in the area. Additionally, the Project would pay all applicable impact fees, water and sewer connection fees, and service fees required by the County and purveyors. Therefore, impacts would be less than significant, and mitigation is not required.

d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Less than Significant Impact. Construction and operations would generate a very minimal amounts of solid waste that would not be in excess of the capacity of local solid waste services. Republic Services, CR&R Environmental Services, and the Bellflower Recycling Center all provide waste and recycling services in the City. Solid waste generation from construction and operations would be small due to the small scale of the proposed development and would also comply with all State and local standards related to solid waste. Therefore, impacts would be less than significant, and mitigation is not required.

e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

No Impact. In California, a variety of federal, state, and local entities oversee solid waste management. They implement laws and regulations designed to make sure that landfill activities are conducted in a way that reduces potential harm to the well-being of the public and the natural environment. Solid waste service providers serving the City and the Project must secure permits for solid waste facilities, storm water discharge, and the construction and operation of gas management systems to adhere to Waste Discharge Requirements. The enforcement of landfill regulations pertaining to health, air, and water quality is carried out by the Local Enforcement Agency, the SCAQMD, and the California Water Resources

Control Board, respectively. Solid waste generated by the Project is typical for office and service uses and will not interfere with the stipulations set by these regulatory authorities. As such, no impact would occur.

Mitigation Measures:

None required.

3.3.20 Wildfires

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XX. Wildfire. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☑
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☐	☑
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☑

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☑

Environmental Setting:

The Project is located within the urbanized area of greater Los Angeles County. The Property is not within an LRA designated by CAL FIRE as a fire hazard severity zone (CAL FIRE 2011) or identified in the County's General Plan Fire Hazard Severity Zones Policy Map as being in a fire hazard area.

Environmental Determination:

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

No Impact. The Project is not located within an LRA designated by CAL FIRE or Los Angeles County as a fire hazard severity zone. The Project has access to major city streets and does not have restricted access. The Project would not impair an emergency response or evacuation plan. No impact would occur.

b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

No Impact. The Project is not located within an LRA designated by CAL FIRE as a fire hazard severity zone. The Property is flat and in the midst of other developments. The Project would not exacerbate wildfire risks or expose occupants to wildfire related pollutants. No impact would occur.

c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

No Impact. The Project is not located within an LRA designated by CAL FIRE as a fire hazard severity zone. The Project would not require the installation or maintenance of associated infrastructure that would exacerbate fire risk or that would result in temporary ongoing impacts to the environment. No impact would occur.

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

No Impact. The Project is not located within an LRA designated by CAL FIRE as a fire hazard severity zone. The Property is flat and would not cause runoff, downslope or downstream flooding, or drainage changes due to wildfire. No impact would occur.

Mitigation Measures:

None required.

3.3.21 Mandatory Findings of Significance

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XXI. Mandatory Findings of Significance.				
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☑	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	☐	☐	☑	☐

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☑	☐

Environmental Determination:

a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Less Than Significant. As discussed above, the Project would not decrease the quality of the environment, reduce fish or wildlife population, or eliminate important examples of major periods of California history or prehistory. Therefore, impacts would be less than significant.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)

Less Than Significant Impact. The Project would not have a cumulatively considerable impact on any of the environmental factors evaluated. Therefore, the Project would have a less than significant impact.

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Less Than Significant Impact. The Project would not result in impacts to human beings that would result in substantial adverse effects on human beings, directly or indirectly. Therefore, the Project would result in a less than significant impact.

4.0 PREPARERS

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5.0 REFERENCES

Bellflower, City of. 2024a. Bellflower Municipal Code. Includes legislation through Ordinance No. 1431 adopted May 28, 2024. Website: (https://ecode360.com/BE4904).

Bellflower, City of. 2024b. Planning And Building Services/ Website: (https://www.bellflower.org/departments/planning/index.php).

Bellflower, City of. 2022. Housing Element of the General Plan: 2021-2029. Website: (https://cms5.revize.com/revize/bellflowerca/Document%20Center/Department/Planning/Planning%20Division/Housing%20Element%20Update/2022-9-7_Bellflower%20HCD%20Review%20HE_Clean.pdf). Bellflower, City of. 2012. Climate Action Plan. Website: (cms5.revize.com/revize/bellflowerca/Document Center/Department/Planning/Environmental Documents and Information/Climate Action Plan (CAP).pdf).

Bellflower, City of. 1994. Noise Element of the General Plan: 1995-2010.

Bellflower Unified School District. 2024. BUSD at a Glance. Website: (https://www.busd.k12.ca.us/).

California Air Pollution Control Officers Association (CAPCOA). 2024. California Emission Estimator Model (CalEEMod)™ Version 2022.1.1.24. Website: (https://caleemod.com/).

California Air Resources Board (CARB). 2022a. Maps of State and Federal Area Designations. Website (https://ww2.arb.ca.gov/resources/documents/maps-state-and-federal-area-designations). Last updated November 2022.

California Air Resources Board (CARB). 2022b. 2022 Scoping Plan for Achieving Carbon Neutrality. Website: (https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2022-scoping-plan-documents).

California Building Standards Commission (CBSC). 2024 Mission Possible 2024. Website: (https://www.dgs.ca.gov/BSC).

California Department of Conservation, 2022. *California Important Farmland Finder*. Website: (https://maps.conservation.ca.gov/DLRP/CIFF/).

California Department of Conservation, *Map Data Layer Viewer*. Website: (https://maps.conservation.ca.gov/cgs/DataViewer/).

California Department of Conservation, California Landslide Inventory. Website (https://maps.conservation.ca.gov/cgs/lsi/).

California Department of Forestry and Fire Protection (CAL FIRE). 2024. Fire Hazard Severity Zone Viewer. Website: (https://calfire-forestry.maps.arcgis.com/apps/webappviewer/index.html?id=988d431a42b242b29d89597ab693d008).

California Department of Forestry and Fire Protection (CAL FIRE). 2011. Map of CAL FIRE's Fire Hazard Severity Zones in Local Responsibility Area. Website: (https://34c031f8-c9fd-4018-8c5a-4159cdff6b0d-cdn-endpoint.azureedge.net/-/media/osfm-website/what-we-do/community-wildfire-preparedness-and-mitigation/fire-hazard-severity-zones/fire-hazard-severity-zones-map/upload-4/losangelescounty.pdf).

California Department of Toxic Substances Control (DTSC), DTSC's EnviroStor Database. Website: (https://www.envirostor.dtsc.ca.gov/public/).

California Department of Transportation (Caltrans). 2013 (September) *Technical Noise Supplement to the Traffic Noise Analysis Protocol*. Website: (https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tens-sep2013-a11y.pdf).

California Department of Water Resources. 2019. DWR Groundwater Basin Boundary Assessment Tool (BBAT). Website (https://gis.water.ca.gov/app/bbat/).

California Environmental Protection Agency (CalEPA), 2006. Climate Action Team Report to Governor Schwarzenegger and the Legislature, March. Website: (https://www.climatechange.ca.gov/climate_action_team/reports/2006report/2006-04-03_FINAL_CAT_REPORT.PDF).

Federal Emergency Management Agency (FEMA). 2019. FEMA Flood Map Service Center. Website (https://msc.fema.gov/portal/home).

Los Angeles County Sanitation Districts. 2024/ Los Coyotes Water Reclamation Plant. Website: (https://www.lacsd.org/services/wastewater-sewage/facilities/los-coyotes-water-reclamation-plant#:~:text=The%20Los%20Coyotes%20Water%20Reclamation%20Plant%20%28WRP%29%20currently,and%20serves%20a%20population%20of%20approximately%20370%2C000%20people).

Niland, Jill and Lucy A. Elam, 2021. Fundamentals of Industrial Hygiene – 7th Edition, National Safety Council.

Southern California Association of Governments (SCAG). 2020 (September) The 2020-2045 Regional Transportation Plan/ Sustainable Communities Strategy of the Southern California Association of Governments – Connect SoCal. Los Angeles, CA: SCAG. Website: (https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocal-plan_0.pdf?1606001176).

South Coast Air Quality Management District. 1993. CEQA Air Quality Handbook.

South Coast Air Quality Management District. 2024. Historical Data by Year. Website: (https://www.aqmd.gov/home/air-quality/historical-air-quality-data/historical-data-by-year).

South Coast Air Quality Management District. Revised March 2023. South Coast AQMD Air Quality Significance Thresholds. Website: (https://www.aqmd.gov/docs/default-source/ceqa/handbook/south-coast-aqmd-air-quality-significance-thresholds.pdf?sfvrsn=25)

South Coast Air Quality Management District. 2022. Final 2022 Air Quality Management Plan. Diamond Bar, CA: SCAQMD. Website: (http://www.aqmd.gov/home/air-quality/air-quality-management-plans/air-quality-mgt-plan).

South Coast Air Quality Management District. 2016. National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) Attainment Status for South Coast Air Basin. Diamond Bar, CA: SCAQMD. Website: (http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/naaqs-caaqs-feb2016.pdf?sfvrsn=2).

South Coast Air Quality Management District. 2008. Final Localized Significance Threshold Methodology. Website: (http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/localized-significance-thresholds).

South Coast Air Quality Management District. 1999. Map of Air Monitoring Areas. Website: (https://www.aqmd.gov/docs/default-source/default-document-library/map-of-monitoring-areas.pdf).

State Water Resources Control Board (SWRCB), Geotracker. Website: (https://geotracker.waterboards.ca.gov/).

United States Environmental Protection Agency. 2023. EPA Region 9 Air Quality Maps and Geographic Information. Website: (https://www3.epa.gov/region9/air/maps/). Last updated 7/21/23.

APPENDIX A – CALEEMOD OUTPUT

Side Studio Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Side Studio
Construction Start Date	11/1/2024
Operational Year	2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.30
Precipitation (days)	8.00
Location	33.875857106864714, -118.11835012069227
County	Los Angeles-South Coast
City	Bellflower
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	4702
EDFZ	7
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.24

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

General Light Industry	7.22	1000sqft	0.17	7,220	3,730	—	—	—
Office Park	4.84	1000sqft	0.11	4,843	—	—	—	—
Parking Lot	25.0	Space	0.45	0.00	—	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	23.6	23.6	5.23	7.29	0.01	0.22	0.23	0.42	0.20	0.05	0.23	—	1,431	1,431	0.06	0.02	0.89	1,439
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.45	1.22	11.4	11.2	0.02	0.53	2.17	2.70	0.49	1.02	1.52	—	1,814	1,814	0.07	0.02	0.01	1,821
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.46	0.44	1.10	1.52	< 0.005	0.05	0.02	0.06	0.04	0.01	0.05	—	296	296	0.01	< 0.005	0.04	298
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.08	0.08	0.20	0.28	< 0.005	0.01	< 0.005	0.01	0.01	< 0.005	0.01	—	49.0	49.0	< 0.005	< 0.005	0.01	49.3

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	23.6	23.6	5.23	7.29	0.01	0.22	0.23	0.42	0.20	0.05	0.23	—	1,431	1,431	0.06	0.02	0.89	1,439
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.45	1.22	11.4	11.2	0.02	0.53	2.17	2.70	0.49	1.02	1.52	—	1,814	1,814	0.07	0.02	0.01	1,821
2025	0.65	0.54	5.24	7.24	0.01	0.22	0.08	0.30	0.20	0.02	0.22	—	1,428	1,428	0.06	0.02	0.01	1,435
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.07	0.05	0.53	0.67	< 0.005	0.02	0.02	0.04	0.02	0.01	0.03	—	127	127	0.01	< 0.005	0.02	128
2025	0.46	0.44	1.10	1.52	< 0.005	0.05	0.02	0.06	0.04	< 0.005	0.05	—	296	296	0.01	< 0.005	0.04	298
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.01	0.01	0.10	0.12	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	0.01	—	21.1	21.1	< 0.005	< 0.005	< 0.005	21.2
2025	0.08	0.08	0.20	0.28	< 0.005	0.01	< 0.005	0.01	0.01	< 0.005	0.01	—	49.0	49.0	< 0.005	< 0.005	0.01	49.3

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.74	0.69	0.36	3.33	0.01	0.01	0.56	0.58	0.01	0.14	0.16	12.1	959	971	1.28	0.04	4.24	1,019
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.64	0.60	0.38	2.59	0.01	0.01	0.56	0.58	0.01	0.14	0.16	12.1	930	942	1.28	0.04	1.95	988

Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.64	0.60	0.33	2.53	0.01	0.01	0.45	0.47	0.01	0.12	0.13	12.1	822	834	1.28	0.04	2.71	879
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.12	0.11	0.06	0.46	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.02	2.00	136	138	0.21	0.01	0.45	146

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.34	0.31	0.24	2.71	0.01	< 0.005	0.56	0.57	< 0.005	0.14	0.15	—	637	637	0.03	0.03	2.35	648
Area	0.39	0.38	< 0.005	0.52	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.16	2.16	< 0.005	< 0.005	—	2.17
Energy	0.01	0.01	0.12	0.10	< 0.005	0.01	—	0.01	0.01	—	0.01	—	303	303	0.03	< 0.005	—	305
Water	—	—	—	—	—	—	—	—	—	—	—	4.85	16.7	21.6	0.50	0.01	—	37.6
Waste	—	—	—	—	—	—	—	—	—	—	—	7.25	0.00	7.25	0.72	0.00	—	25.4
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.89	1.89
Total	0.74	0.69	0.36	3.33	0.01	0.01	0.56	0.58	0.01	0.14	0.16	12.1	959	971	1.28	0.04	4.24	1,019
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.34	0.30	0.26	2.49	0.01	< 0.005	0.56	0.57	< 0.005	0.14	0.15	—	610	610	0.03	0.03	0.06	619
Area	0.29	0.29	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.01	0.01	0.12	0.10	< 0.005	0.01	—	0.01	0.01	—	0.01	—	303	303	0.03	< 0.005	—	305
Water	—	—	—	—	—	—	—	—	—	—	—	4.85	16.7	21.6	0.50	0.01	—	37.6
Waste	—	—	—	—	—	—	—	—	—	—	—	7.25	0.00	7.25	0.72	0.00	—	25.4
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.89	1.89

Total	0.64	0.60	0.38	2.59	0.01	0.01	0.56	0.58	0.01	0.14	0.16	12.1	930	942	1.28	0.04	1.95	988
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.27	0.25	0.21	2.07	< 0.005	< 0.005	0.45	0.46	< 0.005	0.12	0.12	—	501	501	0.03	0.02	0.82	509
Area	0.36	0.35	< 0.005	0.36	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.48	1.48	< 0.005	< 0.005	—	1.48
Energy	0.01	0.01	0.12	0.10	< 0.005	0.01	—	0.01	0.01	—	0.01	—	303	303	0.03	< 0.005	—	305
Water	—	—	—	—	—	—	—	—	—	—	—	4.85	16.7	21.6	0.50	0.01	—	37.6
Waste	—	—	—	—	—	—	—	—	—	—	—	7.25	0.00	7.25	0.72	0.00	—	25.4
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.89	1.89
Total	0.64	0.60	0.33	2.53	0.01	0.01	0.45	0.47	0.01	0.12	0.13	12.1	822	834	1.28	0.04	2.71	879
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.05	0.04	0.04	0.38	< 0.005	< 0.005	0.08	0.08	< 0.005	0.02	0.02	—	82.9	82.9	< 0.005	< 0.005	0.14	84.2
Area	0.06	0.06	< 0.005	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.24	0.24	< 0.005	< 0.005	—	0.25
Energy	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	50.2	50.2	< 0.005	< 0.005	—	50.4
Water	—	—	—	—	—	—	—	—	—	—	—	0.80	2.77	3.57	0.08	< 0.005	—	6.23
Waste	—	—	—	—	—	—	—	—	—	—	—	1.20	0.00	1.20	0.12	0.00	—	4.20
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.31	0.31
Total	0.12	0.11	0.06	0.46	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.02	2.00	136	138	0.21	0.01	0.45	146

3. Construction Emissions Details

3.1. Site Preparation (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.60	0.50	4.60	5.56	0.01	0.24	—	0.24	0.22	—	0.22	—	858	858	0.03	0.01	—	861
Dust From Material Movement	—	—	—	—	—	—	0.21	0.21	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.35	2.35	< 0.005	< 0.005	—	2.36
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.39	0.39	< 0.005	< 0.005	—	0.39
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.03	0.32	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	66.9	66.9	< 0.005	< 0.005	0.01	67.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.19	0.19	< 0.005	< 0.005	< 0.005	0.19
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.03	0.03	< 0.005	< 0.005	< 0.005	0.03
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Grading (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.41	1.19	11.4	10.7	0.02	0.53	—	0.53	0.49	—	0.49	—	1,713	1,713	0.07	0.01	—	1,719

Dust From Material Movemen	—	—	—	—	—	—	2.07	2.07	—	1.00	1.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.39	9.39	< 0.005	< 0.005	—	9.42
Dust From Material Movemen	—	—	—	—	—	—	0.01	0.01	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.55	1.55	< 0.005	< 0.005	—	1.56
Dust From Material Movemen	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.04	0.48	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	100	100	< 0.005	< 0.005	0.01	102
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.56	0.56	< 0.005	< 0.005	< 0.005	0.57
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.09	0.09	< 0.005	< 0.005	< 0.005	0.09
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Building Construction (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.67	0.56	5.60	6.98	0.01	0.26	—	0.26	0.23	—	0.23	—	1,305	1,305	0.05	0.01	—	1,309
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.45	0.56	< 0.005	0.02	—	0.02	0.02	—	0.02	—	105	105	< 0.005	< 0.005	—	105
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.01	0.01	0.08	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	17.3	17.3	< 0.005	< 0.005	—	17.4
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.03	0.29	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	61.3	61.3	< 0.005	< 0.005	0.01	62.1
Vendor	< 0.005	< 0.005	0.08	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	63.8	63.8	< 0.005	0.01	< 0.005	66.5
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.99	4.99	< 0.005	< 0.005	0.01	5.06
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.12	5.12	< 0.005	< 0.005	0.01	5.34
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.83	0.83	< 0.005	< 0.005	< 0.005	0.84
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.85	0.85	< 0.005	< 0.005	< 0.005	0.88
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.62	0.52	5.14	6.94	0.01	0.22	—	0.22	0.20	—	0.20	—	1,305	1,305	0.05	0.01	—	1,309
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.62	0.52	5.14	6.94	0.01	0.22	—	0.22	0.20	—	0.20	—	1,305	1,305	0.05	0.01	—	1,309
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	1.01	1.36	< 0.005	0.04	—	0.04	0.04	—	0.04	—	255	255	0.01	< 0.005	—	256
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.18	0.25	< 0.005	0.01	—	0.01	0.01	—	0.01	—	42.3	42.3	< 0.005	< 0.005	—	42.4
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.32	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	63.4	63.4	< 0.005	< 0.005	0.23	64.3
Vendor	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	62.7	62.7	< 0.005	0.01	0.17	65.6
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.27	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	60.1	60.1	< 0.005	< 0.005	0.01	60.8
Vendor	< 0.005	< 0.005	0.07	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	62.8	62.8	< 0.005	0.01	< 0.005	65.4
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.9	11.9	< 0.005	< 0.005	0.02	12.1
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	12.3	12.3	< 0.005	< 0.005	0.01	12.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.97	1.97	< 0.005	< 0.005	< 0.005	2.00
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.03	2.03	< 0.005	< 0.005	< 0.005	2.12
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Paving (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.61	0.51	4.37	5.31	0.01	0.19	—	0.19	0.18	—	0.18	—	823	823	0.03	0.01	—	826
Paving	0.23	0.23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	11.3	11.3	< 0.005	< 0.005	—	11.3
Paving	< 0.005	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.87	1.87	< 0.005	< 0.005	—	1.87
Paving	< 0.005	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.08	1.22	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	242	242	0.01	0.01	0.89	246
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.19	3.19	< 0.005	< 0.005	0.01	3.23
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.53	0.53	< 0.005	< 0.005	< 0.005	0.53
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Architectural Coating (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	23.4	23.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.83	1.83	< 0.005	< 0.005	—	1.84
Architectural Coatings	0.32	0.32	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.30	0.30	< 0.005	< 0.005	—	0.30
Architectural Coatings	0.06	0.06	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.7	12.7	< 0.005	< 0.005	0.05	12.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.17	0.17	< 0.005	< 0.005	< 0.005	0.17
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.03	0.03	< 0.005	< 0.005	< 0.005	0.03
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.14	0.12	0.10	1.09	< 0.005	< 0.005	0.23	0.23	< 0.005	0.06	0.06	—	256	256	0.01	0.01	0.94	261
Office Park	0.20	0.18	0.14	1.62	< 0.005	< 0.005	0.34	0.34	< 0.005	0.09	0.09	—	381	381	0.02	0.01	1.40	387
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.34	0.31	0.24	2.71	0.01	< 0.005	0.56	0.57	< 0.005	0.14	0.15	—	637	637	0.03	0.03	2.35	648
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.14	0.12	0.11	1.00	< 0.005	< 0.005	0.23	0.23	< 0.005	0.06	0.06	—	246	246	0.01	0.01	0.02	249
Office Park	0.20	0.18	0.16	1.49	< 0.005	< 0.005	0.34	0.34	< 0.005	0.09	0.09	—	365	365	0.02	0.02	0.04	370
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.34	0.30	0.26	2.49	0.01	< 0.005	0.56	0.57	< 0.005	0.14	0.15	—	610	610	0.03	0.03	0.06	619
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.02	0.02	0.02	0.17	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	37.4	37.4	< 0.005	< 0.005	0.06	38.0
Office Park	0.03	0.02	0.02	0.21	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	45.5	45.5	< 0.005	< 0.005	0.07	46.2

Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.05	0.04	0.04	0.38	< 0.005	< 0.005	0.08	0.08	< 0.005	0.02	0.02	—	82.9	82.9	< 0.005	< 0.005	0.14	84.2

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	66.2	66.2	0.01	< 0.005	—	66.5
Office Park	—	—	—	—	—	—	—	—	—	—	—	—	82.4	82.4	0.01	< 0.005	—	82.9
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	16.2	16.2	< 0.005	< 0.005	—	16.3
Total	—	—	—	—	—	—	—	—	—	—	—	—	165	165	0.02	< 0.005	—	166
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	66.2	66.2	0.01	< 0.005	—	66.5
Office Park	—	—	—	—	—	—	—	—	—	—	—	—	82.4	82.4	0.01	< 0.005	—	82.9
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	16.2	16.2	< 0.005	< 0.005	—	16.3
Total	—	—	—	—	—	—	—	—	—	—	—	—	165	165	0.02	< 0.005	—	166
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	11.0	11.0	< 0.005	< 0.005	—	11.0
Office Park	—	—	—	—	—	—	—	—	—	—	—	—	13.6	13.6	< 0.005	< 0.005	—	13.7
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	2.69	2.69	< 0.005	< 0.005	—	2.70
Total	—	—	—	—	—	—	—	—	—	—	—	—	27.3	27.3	< 0.005	< 0.005	—	27.4

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.01	< 0.005	0.08	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	99.0	99.0	0.01	< 0.005	—	99.3
Office Park	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	39.3	39.3	< 0.005	< 0.005	—	39.4
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.01	0.01	0.12	0.10	< 0.005	0.01	—	0.01	0.01	—	0.01	—	138	138	0.01	< 0.005	—	139
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.01	< 0.005	0.08	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	99.0	99.0	0.01	< 0.005	—	99.3
Office Park	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	39.3	39.3	< 0.005	< 0.005	—	39.4
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Total	0.01	0.01	0.12	0.10	< 0.005	0.01	—	0.01	0.01	—	0.01	—	138	138	0.01	< 0.005	—	139
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	16.4	16.4	< 0.005	< 0.005	—	16.4
Office Park	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.51	6.51	< 0.005	< 0.005	—	6.53
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	22.9	22.9	< 0.005	< 0.005	—	23.0

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.26	0.26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.03	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.09	0.09	< 0.005	0.52	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.16	2.16	< 0.005	< 0.005	—	2.17
Total	0.39	0.38	< 0.005	0.52	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.16	2.16	< 0.005	< 0.005	—	2.17
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Consum Products	0.26	0.26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architect ural Coatings	0.03	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.29	0.29	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consum er Products	0.05	0.05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architect ural Coatings	0.01	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landsca pe Equipme nt	0.01	0.01	< 0.005	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.24	0.24	< 0.005	< 0.005	—	0.25
Total	0.06	0.06	< 0.005	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.24	0.24	< 0.005	< 0.005	—	0.25

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	3.20	11.1	14.3	0.33	0.01	—	24.9
Office Park	—	—	—	—	—	—	—	—	—	—	—	1.65	5.60	7.25	0.17	< 0.005	—	12.7

Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	4.85	16.7	21.6	0.50	0.01	—	37.6
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	3.20	11.1	14.3	0.33	0.01	—	24.9
Office Park	—	—	—	—	—	—	—	—	—	—	—	1.65	5.60	7.25	0.17	< 0.005	—	12.7
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	4.85	16.7	21.6	0.50	0.01	—	37.6
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.53	1.84	2.37	0.05	< 0.005	—	4.12
Office Park	—	—	—	—	—	—	—	—	—	—	—	0.27	0.93	1.20	0.03	< 0.005	—	2.10
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.80	2.77	3.57	0.08	< 0.005	—	6.23

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Light Industry	—	—	—	—	—	—	—	—	—	—	—	4.83	0.00	4.83	0.48	0.00	—	16.9
Office Park	—	—	—	—	—	—	—	—	—	—	—	2.43	0.00	2.43	0.24	0.00	—	8.49
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	7.25	0.00	7.25	0.72	0.00	—	25.4
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	4.83	0.00	4.83	0.48	0.00	—	16.9
Office Park	—	—	—	—	—	—	—	—	—	—	—	2.43	0.00	2.43	0.24	0.00	—	8.49
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	7.25	0.00	7.25	0.72	0.00	—	25.4
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.80	0.00	0.80	0.08	0.00	—	2.79
Office Park	—	—	—	—	—	—	—	—	—	—	—	0.40	0.00	0.40	0.04	0.00	—	1.41
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	1.20	0.00	1.20	0.12	0.00	—	4.20

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.88	1.88
Office Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.89	1.89
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.88	1.88
Office Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.89	1.89
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.31	0.31
Office Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.31	0.31

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Remove	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	11/16/2024	11/17/2024	5.00	1.00	—
Grading	Grading	11/18/2024	11/20/2024	5.00	2.00	—
Building Construction	Building Construction	11/21/2024	4/10/2025	5.00	100	—
Paving	Paving	4/11/2025	4/18/2025	5.00	5.00	—
Architectural Coating	Architectural Coating	4/19/2025	4/26/2025	5.00	5.00	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Graders	Diesel	Average	1.00	8.00	148	0.41
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	6.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	6.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	4.00	367	0.29
Building Construction	Forklifts	Diesel	Average	2.00	6.00	82.0	0.20
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Paving	Cement and Mortar Mixers	Diesel	Average	4.00	6.00	10.0	0.56
Paving	Pavers	Diesel	Average	1.00	7.00	81.0	0.42
Paving	Rollers	Diesel	Average	1.00	7.00	36.0	0.38
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	5.00	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	7.50	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	4.58	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	1.98	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	17.5	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	0.92	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT

Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	18,095	6,032	1,163

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	0.50	0.00	—
Grading	—	—	1.50	0.00	—
Paving	0.00	0.00	0.00	0.00	0.45

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt

General Light Industry	0.00	0%
Office Park	0.00	0%
Parking Lot	0.45	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	532	0.03	< 0.005
2025	0.00	532	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
General Light Industry	35.8	14.4	36.1	11,968	317	127	319	105,890
Office Park	53.6	7.94	3.68	14,583	474	70.3	32.6	129,031
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)

0	0.00	18,095	6,032	1,163

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
General Light Industry	69,260	349	0.0330	0.0040	309,030
Office Park	86,304	349	0.0330	0.0040	122,753
Parking Lot	16,983	349	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
General Light Industry	1,669,625	52,312
Office Park	860,765	0.00
Parking Lot	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Light Industry	8.95	—
Office Park	4.50	—
Parking Lot	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
General Light Industry	Other commercial A/C and heat pumps	R-410A	2,088	0.30	4.00	4.00	18.0
Office Park	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Office Park	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	10.4	annual days of extreme heat

Extreme Precipitation	4.50	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	35.2
AQ-PM	70.4
AQ-DPM	92.4
Drinking Water	37.2
Lead Risk Housing	65.6
Pesticides	47.1

Toxic Releases	92.6
Traffic	94.6
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	37.6
Haz Waste Facilities/Generators	0.00
Impaired Water Bodies	43.8
Solid Waste	35.7
Sensitive Population	—
Asthma	70.0
Cardio-vascular	77.8
Low Birth Weights	44.2
Socioeconomic Factor Indicators	—
Education	45.9
Housing	89.4
Linguistic	66.6
Poverty	53.9
Unemployment	0.00

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	37.35403567
Employed	24.62466316
Median HI	15.77056333
Education	—

Bachelor's or higher	35.58321571
High school enrollment	100
Preschool enrollment	84.46041319
Transportation	—
Auto Access	46.0284871
Active commuting	34.63364558
Social	—
2-parent households	3.195175157
Voting	51.70024381
Neighborhood	—
Alcohol availability	14.9108174
Park access	41.58860516
Retail density	57.71846529
Supermarket access	8.879763891
Tree canopy	24.57333504
Housing	—
Homeownership	4.555370204
Housing habitability	8.263826511
Low-inc homeowner severe housing cost burden	9.521365328
Low-inc renter severe housing cost burden	37.77749262
Uncrowded housing	28.58976004
Health Outcomes	—
Insured adults	35.27524702
Arthritis	25.8
Asthma ER Admissions	16.4
High Blood Pressure	15.4
Cancer (excluding skin)	40.8

Asthma	30.0
Coronary Heart Disease	23.5
Chronic Obstructive Pulmonary Disease	22.0
Diagnosed Diabetes	20.7
Life Expectancy at Birth	62.9
Cognitively Disabled	52.2
Physically Disabled	14.3
Heart Attack ER Admissions	17.4
Mental Health Not Good	33.4
Chronic Kidney Disease	20.1
Obesity	30.3
Pedestrian Injuries	60.6
Physical Health Not Good	29.3
Stroke	17.3
Health Risk Behaviors	—
Binge Drinking	77.5
Current Smoker	30.4
No Leisure Time for Physical Activity	33.6
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	2.8
Elderly	70.0
English Speaking	32.7
Foreign-born	64.9
Outdoor Workers	18.2
Climate Change Adaptive Capacity	—

Impervious Surface Cover	4.0
Traffic Density	96.9
Traffic Access	23.0
Other Indices	—
Hardship	58.5
Other Decision Support	—
2016 Voting	19.1

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	72.0
Healthy Places Index Score for Project Location (b)	28.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification

Construction: Construction Phases	No existing structures so no demolition phase.
Operations: Water and Waste Water	Outdoor water use for landscaping consolidated within the light industrial use.
Land Use	Customized to project site

APPENDIX B – GEOTECHNICAL REPORT

Geotechnical Engineering Investigation
Proposed Office/Warehouse Building for
Bellflower-Somerset Water Company
10145 Artesia Place
Bellflower, California

Side Studio
16612 Grand Avenue
Bellflower, California 90706

Attn: Mr. Tobin White

Project Number 23848-23
May 16, 2023

NorCal Engineering

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NorCal Engineering

Soils and Geotechnical Consultants
10641 Humbolt Street Los Alamitos, CA 90720
(562) 799-9469

May 16, 2023 Project Number 23848-23

Side Studio
16612 Grand Avenue
Bellflower, California 90706

Attn.: Mr. Tobin White

RE: **Geotechnical Engineering Investigation** - Proposed Office/Warehouse Building for Bellflower-Somerset Water Company - Located at 10145 Artesia Place, in the City of Bellflower, California

Dear Mr. White:

Pursuant to your request, this firm has performed a Geotechnical Engineering Investigation for the above referenced project in accordance with your approval of our proposal dated March 16, 2023. The purpose of this investigation is to evaluate the geotechnical conditions of the subject site and to provide recommendations for the proposed residential development.

The scope of work included the following: 1) site reconnaissance; 2) subsurface geotechnical exploration and sampling; 3) laboratory testing; 4) soil infiltration testing; 5) engineering analysis of field and laboratory data; 6) preparation of a geotechnical engineering report. It is the opinion of this firm that the proposed development is feasible from a geotechnical standpoint provided that the recommendations presented in this report are followed in the design and construction of the project. It is the opinion of this firm that the proposed development is feasible from a geotechnical standpoint provided that the recommendations presented in this report are followed in the design and construction of the project.

1.0 Project Description

It is proposed to construct a new office/warehouse facility for the Bellflower-Somerset Water Company consisting of two buildings totaling 11,682 square-feet. The structures will be supported by a conventional slab-on-grade foundation system with perimeter-spread footings and isolated interior footings. Additional improvements will include a new asphalt/concrete pavement, hardscape and landscaping. Final building plans shall be reviewed by this firm prior to submittal for city approval to determine the need for any additional study and revised recommendations pertinent to the proposed development, if necessary.

2.0 Site Description

The subject property is located within the 10000 block and north side of Artesia Place, bordered by Woodruff Avenue to the east and Beverly Street to the north, in the City of Bellflower. The generally rectangular shaped lot is elongated in a north to south direction with topography of the relatively level parcel descending gradually from north to south on the order of a few feet. The site was once occupied by a commercial development that has since completely demolished. A small concrete slab is situated towards the center of the site while the reaming portion of the site consists of vacant land.

3.0 Site Exploration

The investigation consisted of the placement of one (1) electronic cone penetrometer (CPT) to a depth of 50 feet and three (3) subsurface exploratory borings by a truck mounted drill rig and with eight-inch outside diameter hollow-stem, continuous flight augers and a hand operated auger to depths ranging between 10 and 50 feet below current ground elevations.

The CPT consists of advancing a cone-tipped cylindrical probe into the ground while simultaneously measuring the resulting resistance to penetration. An on-field computer generated CPT log measures the penetration resistance values and inferred soil description. The boring explorations were visually classified and logged by a field engineer with locations of the subsurface explorations shown on the attached Site Plan.

The exploratory borings revealed the existing earth materials to consist of fill and natural soil. Detailed descriptions of the subsurface conditions are listed on the boring logs in Appendix A. It should be noted that the transition from one soil type to another as shown on the trench logs is approximate and may in fact be a gradual transition. The soils encountered are described as follows:

Fill: A fill soil classifying predominantly as a brown, fine grained silty SAND with occasional gravel was encountered to a depth of 1 to 1½ feet below existing ground surface. These soils were noted to be medium dense and moist.

Natural: A natural undisturbed soil classifying as a brown, fine grained silty SAND to a sandy SILT with some clay was encountered beneath the fill soils. The native soils were observed to be loose to medium dense and moist to very moist.

The overall engineering characteristics of the earth material were relatively uniform with each excavation. Groundwater was encountered at a depth of 28 feet below ground surface. Historic high groundwater in the vicinity has been recorded at 8 feet, as shown on the Seismic Hazard Zone Report for the Los Alamitos 7.5- Minute Quadrangle.

4.0 Laboratory Tests

Relatively undisturbed samples of the subsurface soils were obtained to perform laboratory testing and analysis for direct shear, consolidation tests, and to determine in-place moisture/densities. These relatively undisturbed ring samples were obtained by driving a thin-walled steel sampler lined with one-inch-long brass rings with an inside diameter of 2.42 inches into the undisturbed soils. Bulk bag samples were obtained in the upper soils for expansion index tests and maximum density tests.

Standard penetration tests were obtained by driving a steel sampler unlined with an inside diameter of 1.5 inches into the soils. This standard penetrometer sampler was driven a total of eighteen inches with blow counts tallied every six inches. Blow count data is given on the Boring Logs in Appendix A. Bulk bag samples were obtained in the upper soils for expansion index tests and maximum density tests. All test results are included in Appendix B, unless otherwise noted.

4.1 **Field Moisture Content** (ASTM: D 2216) and the dry density of the ring samples were determined in the laboratory. This data is listed on the logs of explorations.

4.2 **Sieve analyses** (ASTM: D 422-63) and the percent by weight of soil finer than the No. 200 sieve (ASTM: 1140) were performed on selected soil samples. These results are shown later within the body of this report.

4.3 **Maximum Density tests** (ASTM: D 1557) were performed on typical samples of the upper soils. Results of these tests are shown on Table I.

4.4 **Expansion Index tests** (ASTM: D 4829) were performed on remolded samples of the upper soils to determine expansive characteristics. Results of these tests are provided on Table II.

4.5 **Atterberg Limits** (ASTM: D 4318) consisting of liquid limit, plastic limit and plasticity index were performed on representative soil samples. Results are shown on Table III.

4.6 **Corrosion tests** consisting of sulfate, pH, resistivity and chloride analysis to determine potential corrosive effects of soils on concrete and underground utilities. Test results are provided on Table IV.

4.7 **R-Value test** per California Test Method 301 was performed on a representative sample, which may be anticipated to be near subgrade to determine pavement design. Results are provided within the pavement design section of the report.

4.8 **Direct Shear tests** (ASTM: D 3080) were performed on undisturbed and/or remolded samples of the subsurface soils. The test is performed under saturated conditions at loads of 1,000 lbs./sq.ft., 2,000 lbs./sq.ft., and 3,000 lbs./sq.ft. with results shown on Plate A and B.

5.0 Seismicity Evaluation

The proposed development lies outside of any Alquist Priolo Special Studies Zone and the potential for damage due to direct fault rupture is considered unlikely. The nearest fault is the Newport-Inglewood fault located approximately 10 kilometers from the site and is capable of producing a Magnitude 6.9 earthquake. Ground shaking originating from earthquakes along other active faults in the region is expected to induce lower horizontal accelerations due to smaller anticipated earthquakes and/or greater distances to other faults.

The seismic design acceleration parameters for the project site are provided below based on the ASCE/SEI 7-16 American Society of Civil Engineers (ASCE) website, https://asce7hazardtool.online/. The seismic design report is attached is Appendix C.

Seismic Design Acceleration Parameters

Latitude	33.875
Longitude	-118.117
Site Class	D
Risk Category	II
Mapped Spectral Response Acceleration	S_S = 1.571 S_1 = 0.562
Adjusted Maximum Acceleration	S_{MS} = 1.571
Design Spectral Response Acceleration Parameters	S_{DS} = 1.047
Peak Ground Acceleration	PGA_M = 0.738

Use of these values is dependent on requirements of Section 11-4.8, ASCE 7, exception 2 that requires the value of the seismic response coefficient C_s be determined by Equation 12.8.2 for values of $T \leq 1.5T_s$ and taken as equal to 1.5 times the value computed in accordance with either 12.8-3 for $T_L \geq T \geq 1.5T_s$ or Equation 12.8-4 for $T > T_L$. Computations and verification of these conditions is referred to the structural engineer.

6.0 Liquefaction Evaluation

The site is expected to experience ground shaking and earthquake activity that is typical of Southern California area. It is during severe ground shaking that loose, granular soils below the groundwater table can liquefy. A review of the exploratory boring log and the laboratory test results on selected soil samples obtained indicate the following soil classifications, field blowcounts and amounts of fines passing through the No. 200 sieve.

Field Blowcount and Gradation Data

Boring No.	Classification	Blowcounts (blows/ft)	Relative Density	% Passing No. 200 Sieve
B-3 @ 5'	SM	4	Medium Dense	35
B-3 @ 10'	CL	7	Medium Stiff	89
B-3 @ 15'	SM	14	Dense	11
B-3 @ 20'	ML	7	Medium Stiff	95
B-3 @ 25'	ML	8	Medium Stiff	80
B-3 @ 30'	ML	8	Medium Stiff	85
B-3 @ 35'	ML	10	Medium Stiff	84
B-3 @ 40'	SM	28	Dense	9
B-3 @ 45'	SM	15	Medium Stiff	49
B-3 @ 50'	ML-CL	15	Medium Stiff	94

Based upon information in the California Division of Mines and Geology "Seismic Hazard Zone Map – Whittier Quadrangle", dated March 25, 1999, the subject site is situated within an area of historic occurrence of liquefaction, or local geological, geotechnical and groundwater conditions to indicate a potential for permanent ground displacement.

Our liquefaction evaluation utilized the nearest mode of predominate Magnitude 6.9 Mw earthquake in our calculations. The analysis indicates the potential for liquefaction at this site to be high based upon a historical groundwater depth of about 8 feet and a Peak Ground Acceleration (PGA_M) of 0.738g. The associated seismic-induced settlements would be on the order of 3¼ inches, based on the CPT sounding and would occur rather uniformly across the site. Differential settlements would be on the order of 2 inches over a 50-foot (horizontal) distance. Our calculations are given in Appendix D.

Therefore, the design of the planned foundation shall include moderate mitigation to alleviate the effects of seismic induced settlements by incorporating either a post-tensioned slab design, mat foundation or a system of shallow wall and column footings connected with concrete grade beams to provide increased stiffness to the foundation system.

7.0 Infiltration Characteristics

Infiltration tests within the site were performed to provide preliminary infiltration rates for the purpose of planning and design of an on-site water disposal system field testing per County of Los Angeles Department of Public Works (LADPW) – Guidelines for Geotechnical Investigation and Reporting Low Impact Development Stormwater Infiltration. A truck mounted hollow stem auger was used to excavate the exploratory borings (B-1 and B-2) to depths of 5 and 10 feet below existing ground surface within the proposed infiltration areas.

The borings consisted of six-inch diameter test holes. A three-inch diameter perforated PVC casing with solid end cap was installed in the borings and then surrounded with gravel materials to prevent caving. The infiltration holes were carefully filled with clean water and refilled after two initial readings. Based upon the initial rates of infiltration at each location, test measurements were measured at selected maximum intervals thereafter. Measurements were obtained by using an electronic tape measure with 1/16-inch divisions and timed with a stopwatch. Field data sheets are provided in Appendix E.

Based upon the results of our testing, the soils encountered in the planned on-site drainage disposal system area exhibit the following field infiltration rates. The drainage disposal system shall utilize design infiltration rates based on the safety factor required by the city/county.

Boring/Test No.	Depth	Soil Classification	Field Infiltration Rate
B-1/TH-1	5'	Sandy SILT	6.0 in/hr
B-2/TH-2	10'	Sandy SILT w/ some Clay	2.1 in/hr

Groundwater was encountered at a depth of 28 feet below ground surface in our deep boring (exploratory boring B-3). Historic high groundwater in the vicinity has been recorded at 8 feet, as shown on the Seismic Hazard Zone Report for the Los Alamitos 7.5- Minute Quadrangle.

All systems must meet the latest city and/or county specifications and the California Regional Water Quality Control Board (CRWQCB) requirements. It is recommended that foundations shall be setback a minimum distance of 10 feet from the drainage disposal system and the bottom of footing shall be a minimum of 10 feet from the expected zone of saturation. The boundary of the zone of saturation may be assumed to project downward from the top of the permeable portion of the disposal system at an inclination of 1 to 1 or flatter, as determined by the geotechnical engineer.

8.0 Conclusions and Recommendations

Based upon our evaluations, the proposed development is acceptable from a geotechnical engineering standpoint. By following the recommendations and guidelines set forth in our report, the structures will be safe from excessive settlements under the anticipated design loadings and conditions. The proposed development shall meet all requirements of the City Building Ordinance and will not impose any adverse effect on existing adjacent structures.

The following recommendations are based upon soil conditions encountered in our field investigation; these near-surface soil conditions could vary across the site. Variations in the soil conditions may not become evident until the commencement of grading operations for the proposed development and revised recommendations from the geotechnical engineer may be necessary based upon the conditions encountered.

It is recommended that site inspections be performed by a representative of this firm during all grading and construction of the development to verify the findings and recommendations documented in this report. Any unusual conditions which may be encountered in the course of the project development may require the need for additional study and revised recommendations.

8.1 Site Grading Recommendations

Any vegetation and/or demolition debris shall be removed and hauled from proposed grading areas prior to the start of grading operations. Existing vegetation shall not be mixed or disced into the soils. Any removed soils may be reutilized as compacted fill once any deleterious material or oversized materials (in excess of eight inches) is removed. Grading operations shall be performed in accordance with the attached *Specifications for Placement of Compacted Fill.*

8.1.1 Removal and Recompaction Recommendations

All disturbed soils and/or fill (about 1 to 1½ feet below ground surface) shall be removed to competent native material, the exposed surface scarified to a depth of 12 inches, brought to within 2% of optimum moisture content and compacted to a minimum of 90% of the laboratory standard (ASTM: D 1557) prior to placement of any additional compacted fill soils, foundations, slabs-on-grade and pavement. Grading shall extend a minimum of five horizontal feet outside the edges of foundations or equidistant to the depth of fill placed, whichever is greater.

Due to elevated moisture levels in the upper onsite soils, it is possible that some wet and/or yielding soils may be encountered during site grading. Aeration of wet soils could be required; extent of such work will be determined during site grading.

It is possible that isolated areas of undiscovered fill not described in this report are present on site; if found, these areas should be treated as discussed earlier. A diligent search shall also be conducted during grading operations in an effort to uncover any underground structures, irrigation or utility lines. If encountered, these structures and lines shall be either removed or properly abandoned prior to the proposed construction.

Any imported fill material should be preferably soil similar to the upper soils encountered at the subject site. All soils shall be approved by this firm prior to importing at the site and will be subjected to additional laboratory testing to assure concurrence with the recommendations stated in this report.

If placement of slabs-on-grade and pavement is not completed immediately upon completion of grading operations, additional testing and grading of the areas may be necessary prior to continuation of construction operations. Likewise, if adverse weather conditions occur which may damage the subgrade soils, additional assessment by the soils engineer as to the suitability of the supporting soils may be needed.

Care should be taken to provide or maintain adequate lateral support for all adjacent improvements and structures at all times during the grading operations and construction phase. Adequate drainage away from the structures, pavement and slopes should be provided at all times.

8.1.2 **Fill Blanket Recommendations**

Due to the potential for differential settlement of foundations placed on compacted fill and loose upper native materials, it is recommended that all foundations including floor slabs be underlain by a uniform compacted fill blanket at least two feet in thickness. This fill blanket shall extend a minimum of five horizontal feet outside the edges of foundations or equidistant to the depth of fill placed, whichever is greater.

8.2 Temporary Excavations

Temporary *unsurcharged* excavations in the existing site materials may be made at vertical inclinations up to 4 feet in height unless cohesionless soils are encountered. In areas where soils with little or no binder are encountered, where adverse geological conditions are exposed, or where excavations are adjacent to existing structures, shoring or flatter excavations may be required. Additional recommendations regarding specific excavations may be provided once typical detail sections are made available. The temporary cut slope gradients given above do not preclude local raveling and sloughing. All excavations shall be made in accordance with the requirements of the soils engineer, CAL-OSHA and other public agencies having jurisdiction. Care should be taken to provide or maintain adequate lateral support for all adjacent improvements and structures at all times during the grading operations and construction phase.

8.3 Foundation Design

All foundations may be designed utilizing the following allowable bearing capacities for an embedded depth of 24 inches into approved engineered fill with the corresponding widths:

Allowable Bearing Capacity (psf)		
Width (feet)	Continuous Foundation	Isolated Foundation
1.5	2000	2500
2.0	2075	2575
4.0	2375	2875
6.0	2500	3000

The bearing value may be increased by 500 psf for each additional foot of depth in excess of the 24-inch minimum depth, up to a maximum of 4,000 psf. A one-third increase may be used when considering short-term loading and seismic forces. Any foundations located along property line or where lateral overexcavation is not possible may utilize an allowable bearing capacity of 1,500 psf. All foundations shall be reinforced a minimum of two No. 4 bars, top and bottom. A representative of this firm shall inspect all foundation excavations prior to pouring concrete.

As previously stated, it is recommended that the foundation include mitigation of effects from seismic induced settlements by incorporating either a post-tensioned slab design, mat foundation or a system of shallow wall and column footings connected with concrete grade beams to provide increased stiffness to the foundation system.

8.4 **Settlement Analysis**

Resultant pressure curves for the consolidation tests are shown on Plates B and C. Computations utilizing these curves and the recommended allowable soil bearing capacities reveal that the foundations will experience settlements on the order of ¾ inch and differential settlements of less than ¼ inch.

8.5 **Lateral Resistance**

The following values may be utilized in resisting lateral loads imposed on the structure. Requirements of the California Building Code should be adhered to when the coefficient of friction and passive pressures are combined.

Coefficient of Friction - 0.40

Equivalent Passive Fluid Pressure = 250 lbs./cu.ft.

Maximum Passive Pressure = 2,500 lbs./cu.ft.

The passive pressure recommendations are valid only for approved compacted fill soils or competent native materials.

8.6 **Retaining Wall Design Parameters**

Active earth pressures against retaining walls will be equal to the pressures developed by the following fluid densities. These values are for **approved granular backfill material** placed behind the walls at various ground slopes above the walls.

Surface Slope of Retained Materials (Horizontal to Vertical	Equivalent Fluid Density (lb./cu.ft.)
Level	30
5 to 1	35
4 to 1	38
3 to 1	40
2 to 1	45

Any applicable short-term construction surcharges and seismic forces should be added to the above lateral pressure values. An equivalent fluid pressure of 45 pcf may be utilized for the restrained wall condition with a level grade behind the wall.

The seismic-induced lateral soil pressure for walls greater than 6 feet may be computed using a triangular pressure distribution with the maximum value at the top of the wall. The maximum lateral pressure of (20 pcf) H where H is the height of the retained soils above the wall footing should be used in final design of retaining walls. Sliding resistance values and passive fluid pressure values may be increased by 1/3 during short-term wind and seismic loading conditions.

All walls shall be waterproofed as needed and protected from hydrostatic pressure by a reliable permanent subdrain system. The granular backfill to be utilized immediately adjacent to retaining walls shall consist of an approved select granular soil with a sand equivalency greater than 30. This backfill zone of free draining material shall consist of a wedge beginning a minimum of one horizontal foot from the base of the wall extending upward at an inclination of no less than ¾ to 1 (horizontal to vertical).

8.7 **Slab Design**

All concrete slabs shall be a minimum of six inches in thickness in the proposed warehouse areas and four inches in office and hardscape and placed on approved subgrade soils. Additional reinforcement requirements and an increase in thickness of the slabs-on-grade may be necessary based upon soils expansion potential and proposed loading conditions in the structures and should be evaluated further by the project engineers and/or architect.

A vapor retarder (10-mil minimum thickness) should be utilized in areas which would be sensitive to the infiltration of moisture. This retarder shall meet requirements of ASTM E 96, *Water Vapor Transmission of Materials* and ASTM E 1745, *Standard Specification for Water Vapor Retarders used in Contact with Soil or Granular Fill Under Concrete Slabs.* The vapor retarder shall be installed in accordance with procedures stated in ASTM E 1643, *Standard practice for Installation of Water Vapor Retarders used in Contact with Earth or Granular Fill Under Concrete Slabs.* The moisture retarder may be placed directly upon compacted subgrade soils conditioned to near optimum moisture levels, although one to two inches of sand beneath the membrane is desirable. The subgrade upon which the retarder is placed shall be smooth and free of rocks, gravel or other protrusions which may damage the retarder. Use of sand above the retarder is under the purview of the structural engineer; if sand is used over the retarder, it should be placed in a dry condition.

8.8 **Pavement Section Design**

The table below provides a preliminary pavement design based upon an R-Value of 44 for the subgrade soils for the proposed pavement areas. Final pavement design may need to be based on R-Value testing of the subgrade soils near the conclusion of site grading to assure that these soils are consistent with those assumed in this preliminary design. *The recommendations are based upon estimated traffic loads. Client should submit any other anticipated traffic loadings to the geotechnical engineer, if necessary, so that pavement sections may be reviewed to determine adequacy to support the proposed loadings.*

Type of Traffic	Traffic Index	Asphalt (in.)	Base Material (in.)
Automobile Parking Stalls	4.0	3.0	3.0
Light Vehicle Circulation Areas	5.5	3.5	4.5
Heavy Truck Access Areas	7.0	4.0	8.0

Any concrete slab-on-grade in pavement areas shall be a *minimum* of six inches in thickness and may be placed on approved subgrade soils.

All pavement areas shall have positive drainage toward an approved outlet from the site. Drain lines behind curbs and/or adjacent to landscape areas should be considered by client and the appropriate design engineers to prevent water from infiltrating beneath pavement. If such infiltration occurs, damage to pavement, curbs and flow lines, especially on sites with expansive soils, may occur during the life of the project.

Any approved base material shall consist of a Class II aggregate or equivalent and should be compacted to a minimum of 95% relative compaction. All pavement materials shall conform to the requirements set forth by the City of Bellflower. The base material; and asphaltic concrete should be tested prior to delivery to the site and during placement to determine conformance with the project specifications. A pavement engineer shall designate the specific asphalt mix design to meet the required project specifications.

8.9 **Utility Trench and Excavation Backfill**

Trenches from installation of utility lines and other excavations may be backfilled with on-site soils or approved imported soils compacted to a minimum of 90% relative compaction. All utility lines shall be properly bedded with clean sand having a sand equivalency rating of 30 or more. This bedding material shall be thoroughly water jetted around the pipe structure prior to placement of compacted backfill soils.

8.10 **Corrosion Design Criteria**

Representative samples of the surficial soils, typical of the subgrade soils expected to be encountered within foundation excavations and underground utilities were tested for corrosion potential. The minimum resistivity value obtained for the samples tested is representative of an environment that may be severely corrosive to metals. The soil pH value was considered mildly alkaline and may not have a significant effect on soil corrosivity. Consideration should be given to corrosion protection systems for buried metal such as protective coatings, wrappings or the use of PVC where permitted by local building codes.

According to Table 4.3.1 of ACI 318 Building Code and Commentary, these contents revealed negligible sulfate concentrations. Therefore, a Type II cement according to latest CBC specifications may be utilized for building foundations at this time. It is recommended that additional sulfate tests be performed at the completion of site grading to assure that the as graded conditions are consistent with the recommendations stated in this design. Corrosion test results may be found on the attached Table III.

8.11 **Expansive Soil**

The upper on-site soils are very low in expansion potential (EI 0-20). When soils have an expansion index (EI) of 20 or more, special attention should be given to the project design and maintenance. The attached *Expansive Soil Guidelines* should be reviewed by the engineers, architects, owner, maintenance personnel and other interested parties and considered during the design of the project and future property maintenance.

9.0 Closure

The recommendations and conclusions contained in this report are based upon the soil conditions uncovered in our test excavations. No warranty of the soil condition between our excavations is implied. NorCal Engineering should be notified for possible further recommendations if unexpected to unfavorable conditions are encountered during construction phase. It is the responsibility of the owner to ensure that all information within this report is submitted to the Architect and appropriate Engineers for the project.

A preconstruction conference should be held between the developer, general contractor, grading contractor, city inspector, architect, and soil engineer to clarify any questions relating to the grading operations and subsequent construction. Our representative should be present during the grading operations and construction phase to certify that such recommendations are complied within the field.

This geotechnical investigation has been conducted in a manner consistent with the level of care and skill exercised by members of our profession currently practicing under similar conditions in the Southern California area. No other warranty, expressed or implied is made.

We appreciate this opportunity to be of service to you. If you have any further questions, please do not hesitate to contact the undersigned.

Respectfully submitted,
NORCAL ENGINEERING

Keith D. Tucker
Project Engineer
R.G.E. 841

REGISTERED PROFESSIONAL ENGINEER
KEITH D. TUCKER
No. 841
Exp. 12/31/2024
GEOTECHNICAL
STATE OF CALIFORNIA

Mike Barone
Project Manager

SPECIFICATIONS FOR PLACEMENT OF COMPACTED FILL

Excavation

Any existing low-density soils and/or saturated soils shall be removed to competent natural soil under the inspection of the Geotechnical Engineering Firm. After the exposed surface has been cleansed of debris and/or vegetation, it shall be scarified until it is uniform in consistency, brought to the proper moisture content and compacted to a minimum of 90% relative compaction (in accordance with ASTM: D 1557).

In any area where a transition between fill and native soil or between bedrock and soil are encountered, additional excavation beneath foundations and slabs will be necessary in order to provide uniform support and avoid differential settlement of the structure.

Material for Fill

The on-site soils or approved import soils may be utilized for the compacted fill provided they are free of any deleterious materials and shall not contain any rocks, brick, asphaltic concrete, concrete or other hard materials greater than eight inches in maximum dimensions. Any import soil must be approved by the Geotechnical Engineering firm a minimum of 72 hours prior to importation of site.

Placement of Compacted Fill Soils

The approved fill soils shall be placed in layers not excess of six inches in thickness. Each lift shall be uniform in thickness and thoroughly blended. The fill soils shall be brought to within 2% of the optimum moisture content, unless otherwise specified by the Soils Engineering firm. Each lift shall be compacted to a minimum of 90% relative compaction (in accordance with ASTM: D 1557) and approved prior to the placement of the next layer of soil. Compaction tests shall be obtained at the discretion of the Geotechnical Engineering firm but to a minimum of one test for every 500 cubic yards placed and/or for every 2 feet of compacted fill placed.

The minimum relative compaction shall be obtained in accordance with accepted methods in the construction industry. The final grade of the structural areas shall be in a dense and smooth condition prior to placement of slabs-on-grade or pavement areas. No fill soils shall be placed, spread or compacted during unfavorable weather conditions. When the grading is interrupted by heavy rains, compaction operations shall not be resumed until approved by the Geotechnical Engineering firm.

Grading Observations

The controlling governmental agencies should be notified prior to commencement of any grading operations. This firm recommends that the grading operations be conducted under the observation of a Soils Engineering firm as deemed necessary. A 24-hour notice must be provided to this firm prior to the time of our initial inspection.

Observation shall include the clearing and grubbing operations to assure that all unsuitable materials have been properly removed; approve the exposed subgrade in areas to receive fill and in areas where excavation has resulted in the desired finished grade and designate areas of overexcavation; and perform field compaction tests to determine relative compaction achieved during fill placement. In addition, all foundation excavations shall be observed by the Geotechnical Engineering firm to confirm that appropriate bearing materials are present at the design grades and recommend any modifications to construct footings.

EXPANSIVE SOIL GUIDELINES

The following expansive soil guidelines are provided for your project. The intent of these guidelines is to inform you, the client, of the importance of proper design and maintenance of projects supported on expansive soils. ***You, as the owner or other interested party, should be warned that you have a duty to provide the information contained in the soil report including these guidelines to your design engineers, architects, landscapers and other design parties in order to enable them to provide a design that takes into consideration expansive soils.***

In addition, you should provide the soil report with these guidelines to any property manager, lessee, property purchaser or other interested party that will have or assume the responsibility of maintaining the development in the future.

Expansive soils are fine-grained silts and clays which are subject to swelling and contracting. The amount of this swelling and contracting is subject to the amount of fine-grained clay materials present in the soils and the amount of moisture either introduced or extracted from the soils. Expansive soils are divided into five categories ranging from "very low" to "very high". Expansion indices are assigned to each classification and are included in the laboratory testing section of this report. *If the expansion index of the soils on your site, as stated in this report, is 21 or higher, you have expansive soils.* The classifications of expansive soils are as follows:

Classification of Expansive Soil*

Expansion Index	Potential Expansion
0-20	Very Low
21-50	Low
51-90	Medium
91-130	High
Above 130	Very High

*From Table 18A-I-B of California Building Code (1988)

When expansive soils are compacted during site grading operations, care is taken to place the materials at or slightly above optimum moisture levels and perform proper compaction operations. Any subsequent excessive wetting and/or drying of expansive soils will cause the soil materials to expand and/or contract. These actions are likely to cause distress of foundations, structures, slabs-on-grade, sidewalks and pavement over the life of the structure. ***It is therefore imperative that even after construction of improvements, the moisture contents are maintained at relatively constant levels, allowing neither excessive wetting or drying of soils.***

Evidence of excessive wetting of expansive soils may be seen in concrete slabs, both interior and exterior. Slabs may lift at construction joints producing a trip hazard or may crack from the pressure of soil expansion. Wet clays in foundation areas may result in lifting of the structure causing difficulty in the opening and closing of doors and windows, as well as cracking in exterior and interior wall surfaces. In extreme wetting of soils to depth, settlement of the structure may eventually result. Excessive wetting of soils in landscape areas adjacent to concrete or asphaltic pavement areas may also result in expansion of soils beneath pavement and resultant distress to the pavement surface.

Excessive drying of expansive soils is initially evidenced by cracking in the surface of the soils due to contraction. Settlement of structures and on-grade slabs may also eventually result along with problems in the operation of doors and windows.

Projects located in areas of expansive clay soils will be subject to more movement and "hairline" cracking of walls and slabs than similar projects situated on non-expansive sandy soils. There are, however, measures that developers and property owners may take to reduce the amount of movement over the life the development. The following guidelines are provided to assist you in both design and maintenance of projects on expansive soils:

- Drainage away from structures and pavement is essential to prevent excessive wetting of expansive soils. Grades should be designed to the latest building code and maintained to allow flow of irrigation and rain water to approved drainage devices or to the street. Any "ponding" of water adjacent to buildings, slabs and pavement after rains is evidence of poor drainage; the installation of drainage devices or regrading of the area may be required to assure proper drainage. Installation of rain gutters is also recommended to control the introduction of moisture next to buildings. Gutters should discharge into a drainage device or onto pavement which drains to roadways.

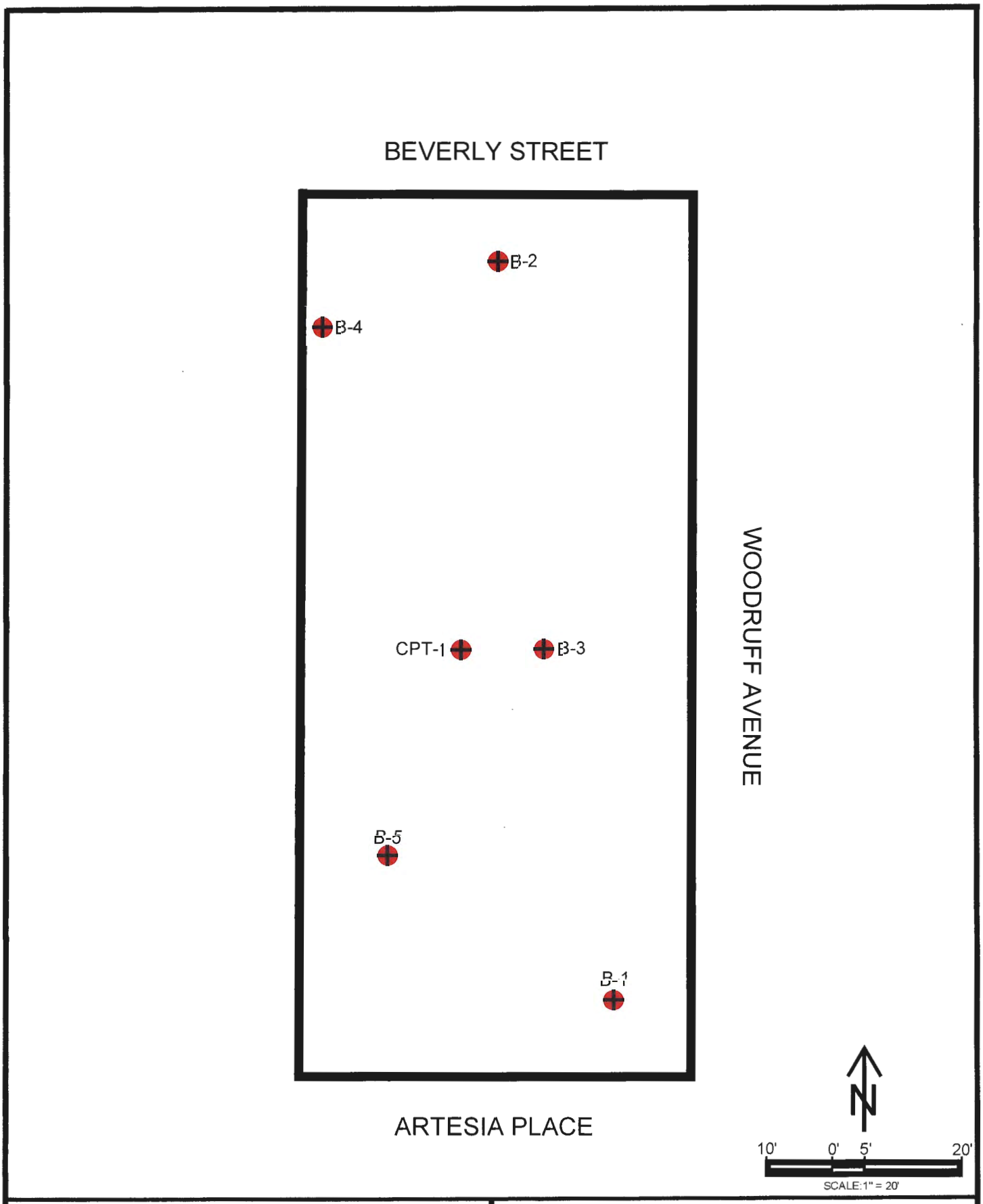
- Irrigation should be strictly controlled around building foundations, slabs and pavement and may need to be adjusted depending upon season. This control is essential to maintain a relatively uniform moisture content in the expansive soils and to prevent swelling and contracting. Over-watering adjacent to improvements may result in damage to those improvements. NorCal Engineering makes no specific recommendations regarding landscape irrigation schedules.

- Planting schemes for landscaping around structures and pavement should be analyzed carefully. Plants (including sod) requiring high amounts of water may result in excessive wetting of soils. Trees and large shrubs may actually extract moisture from the expansive soils, thus causing contraction of the fine-grained soils.

- Thickened edges on exterior slabs will assist in keeping excessive moisture from entering directly beneath the concrete. A six-inch thick or greater deepened edge on slabs may be considered. Underlying interior and exterior slabs with 6 to 12 inches or more of non-expansive soils and providing presaturation of the underlying clayey soils as recommended in the soil report will improve the overall performance of on-grade slabs.

- Increase the amount of steel reinforcing in concrete slabs, foundations and other structures to resist the forces of expansive soils. The precise amount of reinforcing should be determined by the appropriate design engineers and/or architects.

- Recommendations of the soil report should always be followed in the development of the project. Any recommendations regarding presaturation of the upper subgrade soils in slab areas should be performed in the field and verified by the Soil Engineer.



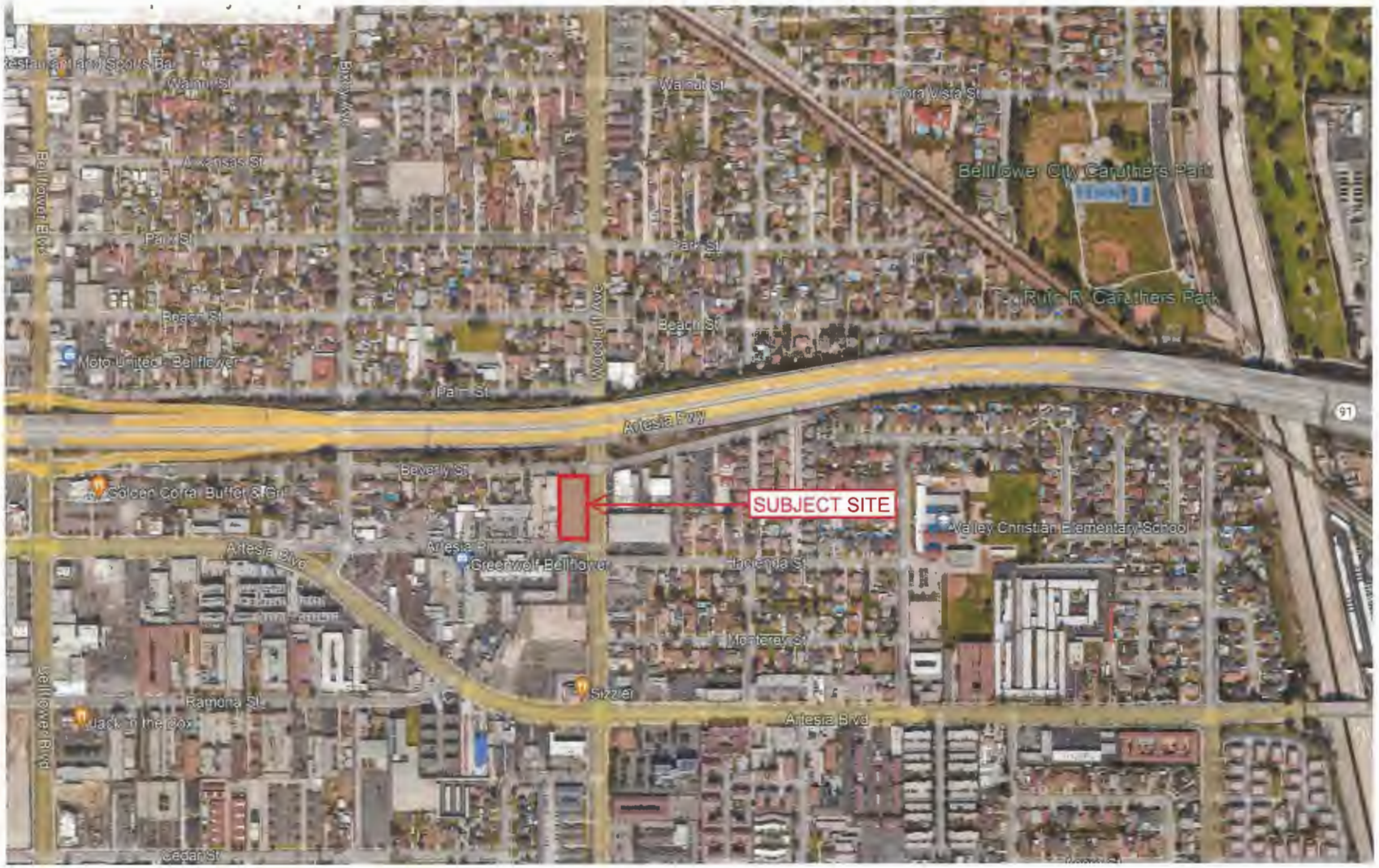
NorCal Engineering
SOILS AND GEOTECHNICAL CONSULTANTS

SIDE STUDIO

PROJECT: 23848-23 | DATE: MAY 2023

SITE PLAN

FIGURE 1



NorCal Engineering

SOILS AND GEOTECHNICAL CONSULTANTS

SIDE STUDIO

PROJECT: 23848-23 | DATE: MAY 2023

VICINITY MAP

FIGURE 2

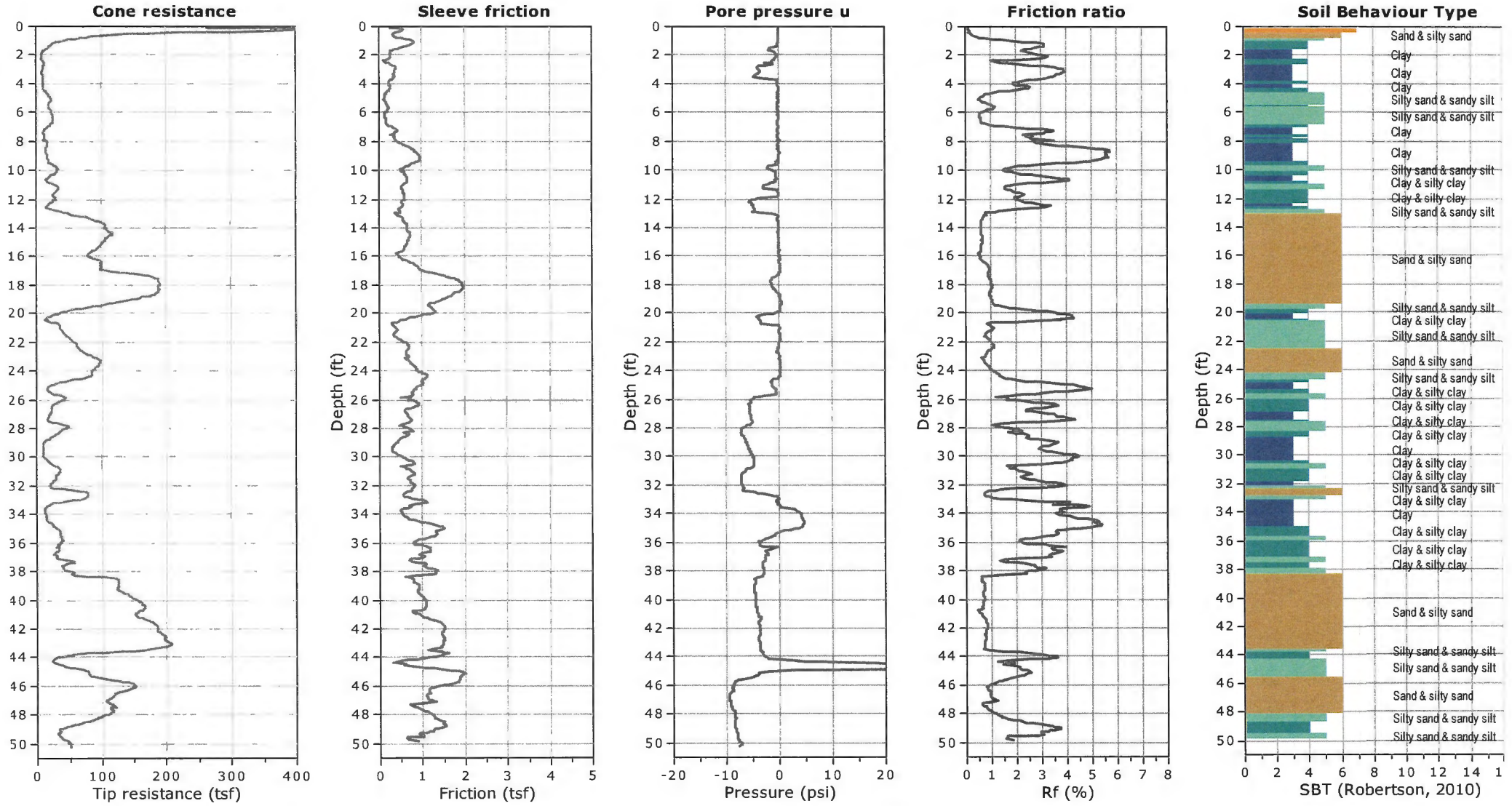
List of Appendices
(in order of appearance)

Appendix A
Log of CPT -1
Log of Borings B-1 to B-3

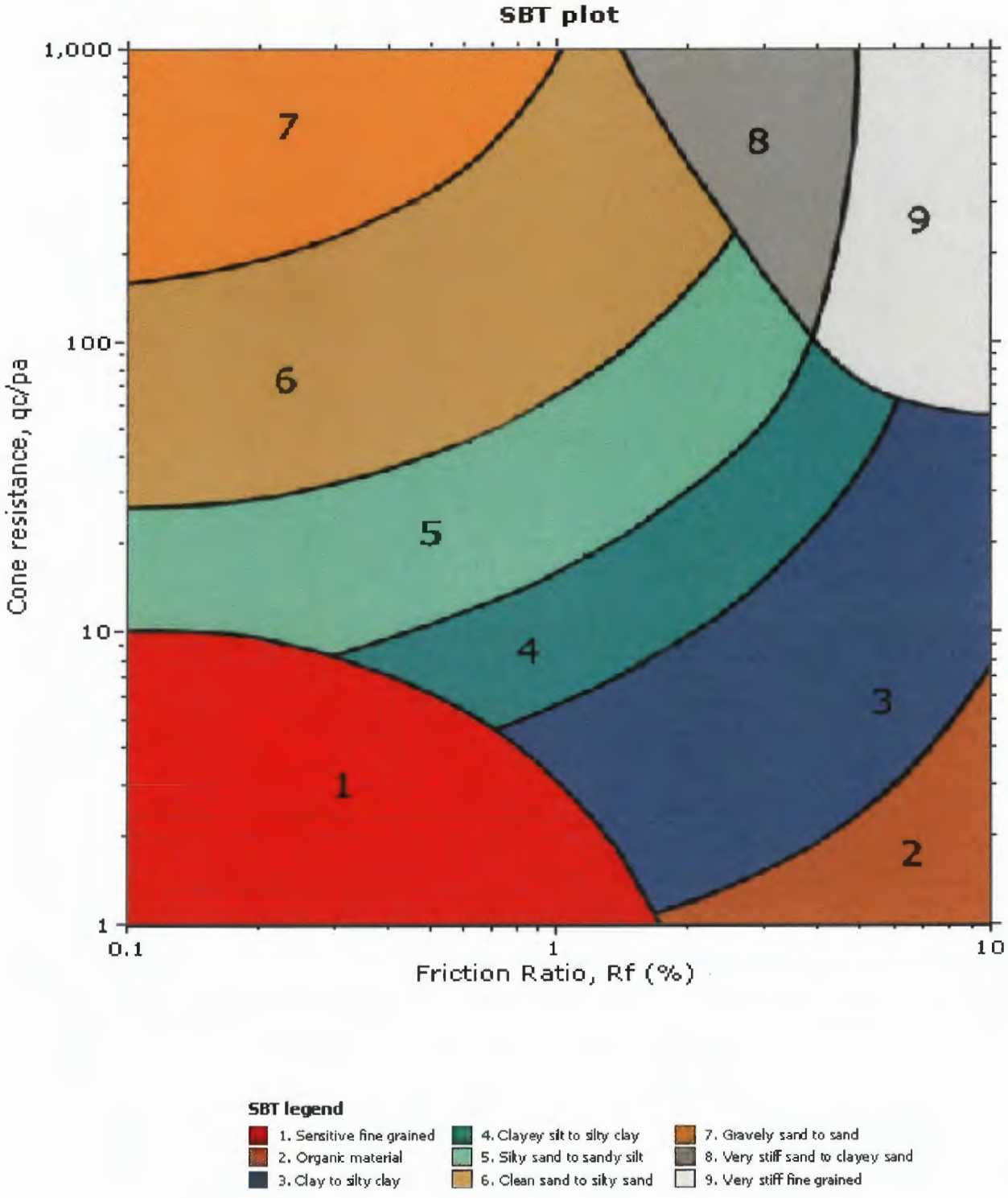
Kehoe Testing and Engineering
714-901-7270
steve@kehoetesting.com
www.kehoetesting.com

Project: NorCal Engineering
Location: 10145 Artesia Place, Bellflower, CA

CPT·
Total depth: 50.21 ft, Date: 4/17/20



Kehoe Testing and Engineering
714-901-7270
rich@kehoetesting.com
www.kehoetesting.com



Depth (ft)	Tip Stress (tsf)	Sleeve Stre (tsf)	Pore Pressu (psi)	Ratio (%)
0	0	0.2591	-0.093	0
0.076	263.05	0.2508	-0.093	0.095
0.138	447.4	0.4249	0	0.095
0.203	401.52	0.5518	0	0.137
0.272	361.42	0.5396	0	0.149
0.345	297.27	0.4022	0	0.135
0.409	217.92	0.383	0	0.176
0.47	167.56	0.3431	-0.093	0.205
0.536	138.56	0.3217	0	0.232
0.6	116.56	0.3246	-0.047	0.278
0.671	82.8	0.372	0	0.449
0.736	77.21	0.4327	0	0.56
0.798	69.47	0.5275	0	0.759
0.864	59.4	0.6467	0	1.089
0.929	50.07	0.7325	0	1.463
0.99	43.17	0.7907	0	1.831
1.054	34.03	0.8203	-0.093	2.41
1.116	29.28	0.8219	-0.093	2.807
1.196	24.99	0.7758	-0.186	3.104
1.26	22.75	0.7081	-0.279	3.112
1.323	20.61	0.6408	-0.279	3.109
1.379	19.58	0.5805	-0.279	2.964
1.452	18.28	0.5005	-1.676	2.738
1.527	16.22	0.4125	-1.769	2.542
1.584	14.83	0.3468	-1.769	2.339
1.649	13.24	0.2927	-1.862	2.211
1.71	11.75	0.2676	-1.211	2.278
1.773	10.63	0.2599	-0.838	2.445
1.856	9.51	0.2545	-0.559	2.676
1.917	8.95	0.2604	-0.652	2.909
1.977	8.49	0.2552	-0.373	3.008
2.042	8.21	0.2656	-0.373	3.237
2.103	8.21	0.2668	-0.279	3.251
2.184	8.21	0.2611	-0.466	3.182
2.249	8.58	0.2364	-0.745	2.755
2.313	9.23	0.1618	-0.838	1.753
2.379	10.44	0.1025	-0.931	0.981
2.447	11.75	0.1393	-1.397	1.185
2.511	12.49	0.1787	-1.024	1.43
2.574	12.77	0.2194	-2.592	1.717
2.64	12.22	0.2678	-1.118	2.193
2.705	12.03	0.3176	-2.592	2.64
2.767	11.38	0.3587	-3.632	3.153
2.831	10.91	0.3835	-3.817	3.516

2.891	10.54	0.3926	-3.817	3.726
2.956	9.98	0.3847	-3.817	3.856
3.019	9.7	0.3774	-3.725	3.892
3.104	9.51	0.3743	-3.445	3.936
3.168	9.51	0.3743	-3.352	3.936
3.235	9.51	0.365	-3.632	3.838
3.3	9.51	0.3513	-4.004	3.694
3.36	9.51	0.3438	-4.283	3.615
3.424	9.79	0.3458	-4.376	3.532
3.483	10.07	0.3464	-4.656	3.44
3.545	10.26	0.3414	-4.749	3.329
3.609	10.26	0.322	-3.445	3.14
3.692	10.26	0.281	-0.279	2.739
3.755	10.26	0.2567	-0.279	2.503
3.816	10.72	0.2393	-0.186	2.232
3.88	11.19	0.2247	-0.186	2.008
3.941	11.56	0.2159	-0.186	1.867
4.024	11.66	0.2181	-0.186	1.871
4.087	11.28	0.233	-0.186	2.065
4.152	10.63	0.2511	-0.186	2.362
4.216	10.26	0.2604	-0.093	2.539
4.278	10.44	0.2584	-0.093	2.474
4.34	10.82	0.2498	-0.093	2.309
4.401	11.47	0.2326	-0.093	2.028
4.463	12.59	0.2139	-0.093	1.7
4.544	14.45	0.1916	-0.093	1.325
4.604	15.76	0.1731	-0.186	1.098
4.665	17.06	0.1523	-0.093	0.893
4.731	17.81	0.1417	-0.186	0.796
4.808	18.46	0.1345	-0.093	0.728
4.874	19.3	0.1298	-0.186	0.672
4.934	20.42	0.128	-0.093	0.627
4.993	21.63	0.1199	-0.186	0.554
5.056	22.57	0.1104	-0.093	0.489
5.121	23.12	0.1226	0	0.53
5.201	22.85	0.1387	-0.093	0.607
5.263	22.19	0.152	-0.186	0.685
5.331	21.07	0.1663	-0.117	0.789
5.383	19.58	0.1773	-0.14	0.905
5.466	18.65	0.1968	-0.14	1.055
5.535	18.65	0.2105	-0.093	1.129
5.581	18.65	0.2171	-0.186	1.164
5.672	19.58	0.2191	-0.186	1.119
5.729	20.61	0.2128	-0.186	1.033
5.794	21.91	0.1996	-0.186	0.911
5.855	22.85	0.1824	-0.093	0.799
5.923	23.68	0.1599	-0.093	0.675

5.988	24.06	0.1425	-0.186	0.592
6.05	24.34	0.1384	-0.093	0.569
6.12	24.62	0.1389	-0.279	0.564
6.188	24.9	0.1409	-0.093	0.566
6.255	25.08	0.1428	-0.093	0.569
6.322	25.27	0.1454	-0.093	0.575
6.389	25.36	0.1495	-0.093	0.589
6.457	25.46	0.1507	-0.093	0.592
6.522	25.55	0.1513	-0.186	0.592
6.592	25.64	0.156	-0.186	0.608
6.657	25.36	0.157	-0.186	0.619
6.719	24.62	0.1636	-0.186	0.665
6.789	23.4	0.1784	-0.186	0.762
6.851	22.01	0.2026	-0.186	0.921
6.912	20.42	0.24	-0.093	1.175
6.977	18.74	0.2896	-0.093	1.545
7.039	16.78	0.3374	-0.093	2.01
7.109	14.64	0.3817	-0.279	2.607
7.176	13.05	0.4067	-0.186	3.116
7.245	11.84	0.4131	-0.186	3.488
7.312	11.38	0.3875	-0.186	3.406
7.376	11.38	0.36	-0.279	3.165
7.442	11.38	0.3522	0	3.096
7.511	11.94	0.269	-0.279	2.254
7.58	12.68	0.3104	-0.279	2.447
7.615	12.96	0.3485	-0.279	2.689
7.681	13.52	0.3206	-0.279	2.371
7.752	13.61	0.3513	-0.186	2.58
7.819	13.71	0.3616	-0.093	2.638
7.884	10.82	0.3788	-0.186	3.502
7.961	15.11	0.4072	0.279	2.696
8.033	16.13	0.4373	0	2.711
8.103	17.16	0.4836	-0.093	2.818
8.138	17.44	0.5106	-0.093	2.928
8.208	17.34	0.5638	-0.279	3.251
8.274	16.6	0.6181	-0.093	3.724
8.341	16.13	0.6721	-0.186	4.166
8.412	15.29	0.718	-0.093	4.695
8.482	14.45	0.7529	-0.186	5.209
8.548	14.27	0.7797	0	5.465
8.618	14.27	0.8175	0	5.73
8.684	14.64	0.8388	0	5.73
8.754	15.48	0.8629	0	5.575
8.822	15.95	0.8889	0.186	5.575
8.89	16.32	0.9138	0	5.6
8.926	16.69	0.9265	0	5.551
8.992	16.97	0.9437	0	5.561

9.061	16.97	0.9581	0.093	5.646
9.126	17.25	0.9629	0	5.582
9.191	17.81	0.9585	0	5.382
9.284	18.46	0.947	0	5.129
9.353	18.37	0.8997	-0.466	4.897
9.386	18.65	0.8711	0	4.671
9.456	19.58	0.8164	-0.466	4.169
9.521	21.73	0.7711	0	3.549
9.589	25.08	0.7214	-0.373	2.876
9.654	28.44	0.6786	-1.304	2.386
9.717	30.58	0.6357	-1.956	2.079
9.786	31.89	0.5805	-2.142	1.82
9.85	32.54	0.5356	-2.142	1.646
9.92	33.2	0.5076	-2.142	1.529
9.979	33.01	0.5023	-1.397	1.522
10.049	32.54	0.5288	-0.838	1.625
10.119	31.52	0.5817	-0.466	1.846
10.187	29.75	0.6	-0.559	2.017
10.255	27.13	0.5995	-0.559	2.209
10.323	24.06	0.6219	-0.652	2.585
10.392	20.98	0.6342	-0.652	3.023
10.462	18.56	0.6433	-0.466	3.467
10.524	16.78	0.6446	-0.373	3.84
10.565	15.76	0.6463	-0.279	4.101
10.64	15.76	0.6519	-0.698	4.137
10.706	15.95	0.6545	-0.745	4.105
10.776	18	0.6452	-0.652	3.585
10.84	20.79	0.6269	-1.025	3.015
10.902	24.06	0.5929	-1.583	2.465
10.97	28.35	0.5632	-1.862	1.987
11.037	31.05	0.5382	-2.793	1.733
11.106	32.82	0.5244	-2.887	1.598
11.175	33.48	0.5244	-2.887	1.567
11.243	33.57	0.5244	-2.98	1.562
11.309	33.1	0.5433	-0.186	1.641
11.377	32.17	0.5688	-0.186	1.768
11.445	30.49	0.5751	-0.186	1.886
11.514	28.16	0.5735	-0.093	2.036
11.55	26.76	0.5781	-0.093	2.16
11.62	25.08	0.5907	-0.093	2.355
11.681	25.18	0.5881	-0.093	2.336
11.749	26.39	0.5868	-0.093	2.224
11.815	28.63	0.5868	-0.186	2.05
11.877	30.03	0.5868	-1.118	1.954
11.973	29.75	0.5826	-3.817	1.959
12.009	29	0.5769	-4.469	1.989
12.082	26.57	0.5568	-5.028	2.095

12.141	24.62	0.5415	-5.494	2.2
12.21	22.57	0.54	-5.4	2.393
12.277	20.79	0.5393	-5.307	2.593
12.345	19.12	0.5445	-5.121	2.849
12.411	17.81	0.5633	-5.028	3.163
12.477	16.78	0.5685	-4.842	3.387
12.545	16.04	0.5193	-4.842	3.238
12.604	16.22	0.462	-4.749	2.848
12.674	18.18	0.462	-4.656	2.541
12.743	25.55	0.4651	-4.563	1.82
12.81	36.27	0.4849	-4.563	1.337
12.878	43.36	0.501	-5.121	1.156
12.947	47	0.3619	-4.19	0.77
13.017	51.01	0.4068	-1.397	0.797
13.087	56.23	0.4553	-0.373	0.81
13.124	59.96	0.4172	-0.373	0.696
13.222	72.73	0.5145	-0.093	0.707
13.256	76.56	0.5394	-0.093	0.705
13.321	81.12	0.5618	-0.14	0.692
13.41	87.65	0.5687	-0.14	0.649
13.474	91.85	0.5716	-0.186	0.622
13.538	96.42	0.5846	-0.093	0.606
13.611	101.17	0.6061	0	0.599
13.68	105	0.6309	0	0.601
13.745	106.39	0.652	0	0.613
13.806	106.39	0.6611	0.093	0.621
13.876	105.93	0.6585	0.093	0.622
13.911	106.35	0.6556	0	0.616
13.977	105.65	0.6505	0	0.616
14.046	106.3	0.6483	0	0.61
14.115	108.91	0.6541	0	0.601
14.179	111.71	0.6618	-0.093	0.592
14.247	114.32	0.6821	0	0.597
14.319	116.65	0.7088	-0.186	0.608
14.388	117.96	0.7285	0	0.618
14.459	116.74	0.7317	0	0.627
14.529	113.95	0.726	0	0.637
14.592	111.06	0.7163	-0.093	0.645
14.657	108.73	0.7051	0.093	0.649
14.728	107.33	0.6961	0.093	0.649
14.79	106.49	0.6856	0.093	0.644
14.856	106.11	0.6769	0	0.638
14.923	104.9	0.6737	0	0.642
14.984	103.13	0.672	0	0.652
15.046	101.36	0.6675	0	0.659
15.118	99.77	0.6503	0	0.652
15.185	98.47	0.6276	0	0.637

15.247	97.63	0.6102	0.093	0.625
15.318	95.86	0.5979	0	0.624
15.385	93.81	0.5902	0.093	0.629
15.451	91.19	0.5816	0.093	0.638
15.516	88.96	0.5658	0.186	0.636
15.583	86.25	0.5481	0.093	0.635
15.619	85.04	0.5385	0.093	0.633
15.688	82.62	0.4903	0.093	0.594
15.755	80.56	0.401	0	0.498
15.823	79.35	0.4145	0	0.522
15.892	78.98	0.4336	0	0.549
15.96	80.1	0.4578	0.186	0.572
16.023	82.52	0.4769	0.093	0.578
16.092	82.62	0.4975	0.279	0.602
16.153	90.73	0.523	0.279	0.576
16.218	95.39	0.5638	0.186	0.591
16.285	98.37	0.6219	0.093	0.632
16.35	99.68	0.677	0.093	0.679
16.417	99.87	0.7299	0.093	0.731
16.483	99.03	0.7777	0.093	0.785
16.548	99.77	0.8252	0.279	0.827
16.615	98.93	0.8643	0.279	0.874
16.682	99.68	0.894	0.279	0.897
16.748	99.68	0.9129	0.279	0.916
16.819	98.28	0.9256	0.279	0.942
16.888	98.75	0.94	0.279	0.952
16.959	104.25	0.9833	0.279	0.943
17.025	114.13	1.068	0.186	0.936
17.093	129.43	1.1733	0.186	0.907
17.128	137.44	1.2285	0.093	0.894
17.224	157.77	1.3863	0.093	0.879
17.292	168.5	1.4834	0.093	0.88
17.327	172.41	1.5158	-0.279	0.879
17.394	178.75	1.5858	-0.466	0.887
17.485	184.91	1.7067	-1.304	0.923
17.549	187.8	1.7688	-1.304	0.942
17.619	188.92	1.8223	-1.304	0.965
17.655	188.82	1.8474	-1.304	0.978
17.722	189.29	1.89	-1.49	0.998
17.789	189.76	1.9221	-1.49	1.013
17.859	190.97	1.9383	-1.49	1.015
17.923	191.34	1.9394	-1.211	1.014
17.99	190.6	1.94	-1.211	1.018
18.059	189.29	1.951	-1.211	1.031
18.131	189.24	1.962	-1.211	1.037
18.196	189.24	1.9574	-0.931	1.034
18.262	189.2	1.942	-0.931	1.026

18.328	189.38	1.9298	-0.838	1.019
18.397	188.82	1.9233	-0.559	1.019
18.46	187.52	1.8814	-0.466	1.003
18.526	185.28	1.7735	-0.466	0.957
18.597	182.95	1.7392	-0.093	0.951
18.668	180.9	1.7264	-0.093	0.954
18.733	178.19	1.71	0.186	0.96
18.799	174.65	1.6703	0.093	0.956
18.841	162.44	1.6415	0.279	1.011
18.923	161.41	1.5718	0.372	0.974
18.982	154.32	1.5193	0.372	0.984
19.035	147.05	1.4849	0.372	1.01
19.095	138.47	1.4479	0.372	1.046
19.185	125.88	1.3446	0.465	1.068
19.246	118.52	1.2701	0.465	1.072
19.314	110.96	1.1961	0.465	1.078
19.381	103.97	1.1516	0.465	1.108
19.445	96.88	1.1459	0.372	1.183
19.514	87.93	1.1708	0.279	1.331
19.579	78.89	1.2102	0.279	1.534
19.643	69.47	1.2389	0.279	1.783
19.706	60.42	1.254	0.279	2.075
19.772	51.75	1.2763	0.279	2.466
19.839	44.85	1.3083	0.186	2.917
19.9	40.1	1.3189	-0.093	3.289
19.966	36.18	1.2793	-0.652	3.536
20.038	32.26	1.1771	-1.025	3.648
20.106	26.85	1.0676	-2.328	3.976
20.168	22.47	0.9469	-3.725	4.214
20.23	19.4	0.8148	-4.097	4.201
20.299	16.97	0.7141	-3.725	4.208
20.361	15.29	0.6546	-3.911	4.281
20.429	16.69	0.5866	-3.725	3.514
20.494	13.52	0.508	-3.632	3.757
20.559	16.41	0.4474	-3.445	2.726
20.627	22.57	0.3972	-3.352	1.76
20.694	29.84	0.291	-3.352	0.975
20.761	34.59	0.2899	-3.539	0.838
20.827	36.46	0.3409	-0.838	0.935
20.895	37.21	0.3414	-0.093	0.918
20.963	37.11	0.3749	0.093	1.01
21.029	36.27	0.3988	0.279	1.1
21.071	36.37	0.4089	0.186	1.125
21.15	38.79	0.4124	0	1.063
21.211	39.63	0.4046	0	1.021
21.275	40.38	0.3846	0	0.953
21.343	41.59	0.3569	0	0.858

21.409	42.52	0.3388	0	0.797
21.471	43.55	0.3382	0.186	0.777
21.54	45.04	0.3379	0.186	0.75
21.604	46.81	0.3508	0.186	0.749
21.672	48.95	0.3891	0.279	0.795
21.735	50.82	0.4255	0.279	0.837
21.805	52.59	0.4657	0.279	0.885
21.87	53.9	0.5023	0.186	0.932
21.934	55.29	0.5363	0.186	0.97
22	57.44	0.5748	0	1.001
22.07	59.86	0.6149	0	1.027
22.133	61.45	0.6438	0	1.048
22.198	62.2	0.666	0	1.071
22.267	62.47	0.6854	0	1.097
22.332	62.47	0.6974	-0.093	1.116
22.396	63.13	0.6958	-0.093	1.102
22.464	64.34	0.682	-0.186	1.06
22.535	66.2	0.6595	-0.186	0.996
22.594	68.07	0.641	-0.186	0.942
22.661	70.68	0.6282	-0.186	0.889
22.726	73.48	0.6239	-0.466	0.849
22.796	76.74	0.6291	0	0.82
22.863	80.1	0.6371	0	0.795
22.928	83.27	0.659	0.093	0.791
22.998	86.63	0.6948	0.186	0.802
23.064	89.8	0.6189	0.093	0.689
23.098	91.38	0.5771	0.093	0.632
23.195	95.2	0.621	0.093	0.652
23.232	96.32	0.6439	0.093	0.668
23.297	97.82	0.6817	0.186	0.697
23.364	98.65	0.7165	0.217	0.726
23.446	97.02	0.7373	0.279	0.76
23.509	96.23	0.7587	0.279	0.788
23.575	95.95	0.7835	0.279	0.817
23.645	94.83	0.8219	0.279	0.867
23.713	92.87	0.8524	0.372	0.918
23.776	90.73	0.8627	0.279	0.951
23.842	89.24	0.8665	0.279	0.971
23.908	87.37	0.8732	0.279	0.999
23.975	85.97	0.887	0.279	1.032
24.046	85.6	0.9289	0.279	1.085
24.114	85.6	0.9763	0.279	1.141
24.18	85.51	1.0296	0.279	1.204
24.214	85.41	1.055	0.279	1.235
24.314	84.85	1.1097	0.186	1.308
24.348	84.2	1.1132	0.186	1.322
24.413	81.03	1.1071	0.093	1.366

24.479	75.16	1.0861	-0.093	1.445
24.548	65.93	1.0547	-0.186	1.6
24.611	57.25	1.021	-1.025	1.783
24.677	48.95	0.9929	-1.211	2.028
24.744	41.96	0.9997	-1.211	2.382
24.811	35.34	1.0185	-1.49	2.882
24.881	29.75	1.0284	-1.397	3.457
24.942	25.83	1.0274	-1.304	3.978
25.009	22.85	0.9783	-1.304	4.282
25.082	20.05	0.8937	-1.211	4.458
25.145	18.18	0.8585	-0.931	4.721
25.215	17.06	0.8419	-0.838	4.934
25.282	16.41	0.8194	-0.652	4.993
25.348	17.72	0.8044	-0.652	4.54
25.412	19.86	0.7896	-0.559	3.976
25.48	21.91	0.7651	-0.559	3.492
25.547	24.52	0.7668	-0.559	3.127
25.616	28.72	0.776	-0.559	2.702
25.683	34.78	0.7707	-0.652	2.216
25.75	41.03	0.7466	-2.514	1.82
25.818	43.92	0.5001	-4.283	1.139
25.889	44.11	0.7278	-4.656	1.65
25.923	43.73	0.7217	-4.656	1.65
25.993	41.77	0.6665	-5.307	1.596
26.063	38.88	0.775	-5.4	1.993
26.126	35.25	0.8464	-5.369	2.401
26.188	33.01	0.9017	-5.369	2.732
26.247	30.49	0.9312	-5.369	3.054
26.341	26.3	0.9368	-5.68	3.563
26.409	24.24	0.8868	-5.587	3.658
26.445	23.31	0.8495	-5.587	3.644
26.514	23.4	0.7737	-5.494	3.306
26.584	23.4	0.7014	-5.494	2.997
26.644	23.5	0.6318	-5.4	2.689
26.713	24.34	0.5825	-5.4	2.393
26.782	24.24	0.5815	-5.4	2.398
26.844	23.22	0.5982	-5.4	2.576
26.909	21.73	0.6389	-5.4	2.941
26.977	20.33	0.6669	-5.4	3.281
27.038	19.4	0.6726	-5.4	3.468
27.104	19.02	0.6701	-5.307	3.523
27.171	18.74	0.6764	-5.307	3.609
27.241	18.37	0.706	-5.214	3.843
27.303	17.9	0.7273	-5.214	4.062
27.369	17.25	0.7471	-5.214	4.331
27.438	17.44	0.749	-5.214	4.295
27.499	19.49	0.7165	-5.121	3.677

27.572	24.9	0.691	-5.121	2.775
27.639	31.24	0.6463	-5.121	2.069
27.709	38.98	0.5471	-5.214	1.404
27.778	45.5	0.4755	-5.587	1.045
27.844	49.05	0.5103	-5.959	1.04
27.916	48.3	0.6073	-6.425	1.257
27.986	44.2	0.679	-6.797	1.536
28.02	42.24	0.7072	-6.983	1.674
28.089	38.42	0.7583	-6.983	1.974
28.154	36.18	0.7939	-6.983	2.194
28.224	35.62	0.7092	-6.983	1.991
28.294	34.78	0.5691	-6.983	1.636
28.365	32.92	0.6572	-6.983	1.997
28.433	30.21	0.6864	-6.983	2.272
28.498	27.23	0.6596	-6.983	2.422
28.561	24.15	0.6005	-6.673	2.486
28.613	22.29	0.5516	-6.673	2.475
28.68	21.45	0.5078	-6.673	2.368
28.749	18.46	0.4712	-6.425	2.552
28.818	15.57	0.4496	-6.331	2.887
28.885	13.43	0.4383	-6.331	3.265
28.952	11.75	0.4237	-6.238	3.606
29.016	10.91	0.3946	-6.146	3.617
29.085	10.44	0.3672	-6.052	3.516
29.156	10.16	0.3438	-5.959	3.383
29.226	9.88	0.3228	-5.866	3.266
29.294	9.79	0.2972	-5.866	3.035
29.357	9.79	0.2845	-5.68	2.906
29.417	9.79	0.2824	-5.68	2.885
29.483	9.79	0.2879	-5.587	2.941
29.552	9.79	0.2978	-5.494	3.041
29.616	9.98	0.3175	-5.4	3.182
29.686	10.35	0.348	-5.307	3.362
29.755	10.63	0.3908	-5.307	3.677
29.816	10.91	0.4368	-5.214	4.003
29.868	11.1	0.4763	-5.121	4.292
29.939	11.66	0.5199	-5.028	4.46
30.009	12.59	0.5517	-4.935	4.383
30.081	13.61	0.5762	-4.842	4.232
30.147	15.01	0.622	-4.842	4.143
30.215	16.5	0.6929	-4.749	4.198
30.282	18	0.7451	-4.749	4.14
30.347	19.49	0.7746	-4.749	3.975
30.413	21.07	0.7979	-4.656	3.786
30.465	22.85	0.811	-4.656	3.55
30.53	25.83	0.773	-4.656	2.993
30.599	29.37	0.5057	-4.656	1.722

30.668	32.73	0.5217	-4.749	1.594
30.73	35.15	0.6301	-5.028	1.793
30.801	36.46	0.6195	-5.494	1.699
30.87	36.09	0.6917	-6.052	1.917
30.913	36.18	0.7272	-6.285	2.01
30.988	36.27	0.7671	-6.285	2.115
31.05	35.15	0.7853	-6.285	2.234
31.121	33.57	0.8115	-6.89	2.417
31.191	31.8	0.8194	-7.077	2.577
31.257	30.58	0.7858	-7.077	2.569
31.323	30.58	0.7191	-7.077	2.351
31.39	30.58	0.6706	-7.077	2.193
31.459	30.58	0.6568	-7.077	2.148
31.523	29.84	0.6735	-7.077	2.257
31.589	28.25	0.7083	-7.17	2.507
31.655	26.57	0.7243	-7.077	2.725
31.72	24.9	0.7215	-7.17	2.898
31.785	23.03	0.7221	-7.077	3.135
31.856	21.73	0.7722	-7.077	3.554
31.922	20.89	0.8002	-6.983	3.831
31.956	21.63	0.8068	-6.983	3.73
32.026	20.42	0.8091	-6.89	3.962
32.092	21.54	0.7808	-6.797	3.625
32.16	27.6	0.7651	-6.704	2.772
32.228	38.98	0.7687	-6.611	1.972
32.299	54.64	0.7642	-6.797	1.398
32.367	67.7	0.7353	-6.797	1.086
32.436	75.34	0.6697	-6.797	0.889
32.5	78.79	0.6019	-4.563	0.764
32.564	80.01	0.5654	-4.004	0.707
32.627	79.91	0.5635	-3.073	0.705
32.693	79.07	0.5755	-1.769	0.728
32.758	77.86	0.6078	-0.745	0.781
32.827	76.09	0.6648	-0.279	0.874
32.897	72.55	0.769	-0.186	1.06
32.963	66.48	0.916	0	1.378
33.033	56.41	1.0318	0	1.829
33.098	45.22	1.0966	-0.466	2.425
33.167	34.69	1.108	-0.466	3.194
33.233	26.11	1.078	-0.279	4.129
33.298	21.35	0.8157	-0.279	3.82
33.334	19.95	0.6817	-0.186	3.416
33.403	17.34	0.7635	0	4.402
33.476	15.11	0.7354	0.186	4.869
33.543	13.8	0.6476	0.372	4.693
33.614	12.96	0.5481	0.558	4.229
33.675	13.66	0.5064	2.979	3.707

33.755	13.52	0.5012	3.259	3.707
33.825	13.89	0.5347	3.538	3.848
33.859	13.71	0.5387	3.631	3.93
33.959	14.55	0.5301	3.91	3.644
33.99	14.92	0.5292	4.003	3.547
34.086	15.11	0.5527	4.19	3.659
34.153	14.92	0.5994	4.19	4.018
34.189	15.2	0.6271	4.283	4.126
34.258	15.39	0.663	4.283	4.309
34.329	15.76	0.7006	4.376	4.446
34.394	16.04	0.7786	4.469	4.854
34.464	16.88	0.8736	4.562	5.176
34.536	18.84	0.9951	4.655	5.283
34.601	21.45	1.0905	4.748	5.085
34.67	23.4	1.2069	4.655	5.157
34.738	24.62	1.3279	4.562	5.394
34.806	26.48	1.4175	4.469	5.353
34.873	28.25	1.48	4.469	5.238
34.937	30.58	1.5082	4.283	4.931
35.007	33.2	1.4795	3.445	4.457
35.046	34.13	1.4367	2.793	4.21
35.112	35.62	1.3544	2.048	3.802
35.176	36.74	1.3183	1.117	3.588
35.241	37.11	1.3266	0.279	3.575
35.313	37.3	1.3494	-0.279	3.618
35.379	37.11	1.3506	-0.559	3.639
35.442	36.65	1.326	-0.745	3.618
35.504	37.11	1.2817	-0.838	3.454
35.568	37.86	1.2181	-1.118	3.218
35.637	38.51	1.1264	-1.583	2.925
35.703	38.88	1.0169	-2.328	2.615
35.767	39.16	0.913	-2.7	2.331
35.835	39.91	0.8453	-2.886	2.118
35.901	38.79	0.8138	-3.632	2.098
35.966	37.21	0.7964	-3.817	2.141
36.035	35.53	0.7852	-3.632	2.21
36.102	33.48	0.8128	-3.725	2.428
36.168	31.7	0.98	-3.632	3.091
36.239	33.57	1.0953	-3.632	3.263
36.303	29.56	1.1591	-2.98	3.921
36.364	33.66	1.1995	-0.373	3.563
36.443	34.87	1.1906	-1.118	3.414
36.509	34.41	1.1929	-1.862	3.467
36.576	31.98	1.1694	-2.514	3.656
36.643	29.19	1.1125	-2.514	3.812
36.71	27.04	0.9913	-2.421	3.666
36.779	26.67	0.9209	-2.235	3.453

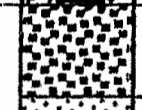
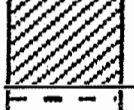
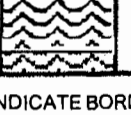
36.844	28.53	0.9641	-2.142	3.379
36.88	30.58	1.0022	-2.049	3.277
36.945	31.89	1.0507	-2.607	3.295
37.008	30.03	1.0159	-2.607	3.384
37.075	32.17	0.9035	-2.607	2.809
37.143	32.45	0.7303	-2.607	2.25
37.213	45.13	0.7023	-2.514	1.556
37.282	58.19	0.7715	-2.514	1.326
37.349	57.53	0.9331	-3.166	1.622
37.415	51.94	1.0572	-3.259	2.036
37.487	45.32	1.0839	-3.259	2.392
37.549	40.75	1.0548	-3.259	2.589
37.616	38.04	1.0334	-3.259	2.716
37.68	39.91	1.0764	-3.166	2.697
37.743	41.31	1.1661	-3.073	2.823
37.806	40.19	1.2654	-2.886	3.149
37.875	42.8	1.3353	-2.793	3.12
37.944	48.39	1.3276	-2.793	2.743
38.013	54.27	1.3254	-2.793	2.442
38.079	56.97	1.3141	-2.98	2.307
38.15	56.6	1.2936	-2.98	2.285
38.213	53.8	1.2837	-2.98	2.386
38.283	58.19	0.8356	-3.073	1.436
38.351	78.89	0.5818	-3.073	0.737
38.416	105.83	0.6551	-3.259	0.619
38.487	122.34	0.75	-4.097	0.613
38.52	125.23	0.7791	-4.656	0.622
38.607	125.6	0.7946	-4.532	0.633
38.657	125.6	0.7838	-4.407	0.624
38.72	125.98	0.7922	-4.407	0.629
38.784	125.32	0.8226	-4.578	0.656
38.851	125.32	0.8746	-4.578	0.698
38.916	125.32	0.9058	-4.749	0.723
38.979	125.32	0.9139	-4.749	0.729
39.043	125.32	0.9156	-4.749	0.731
39.138	124.86	0.9117	-4.749	0.73
39.206	125.04	0.908	-4.749	0.726
39.272	125.98	0.9016	-4.656	0.716
39.306	126.72	0.8984	-4.656	0.709
39.374	129.05	0.8968	-4.656	0.695
39.444	132.04	0.8985	-4.656	0.68
39.514	135.67	0.9083	-4.656	0.669
39.585	139.31	0.9253	-4.563	0.664
39.649	141.27	0.9472	-4.563	0.671
39.716	143.79	0.9777	-4.563	0.68
39.782	145.84	1.0071	-4.563	0.691
39.852	148.17	1.0354	-4.563	0.699

39.913	150.87	1.0528	-4.563	0.698
39.978	153.11	1.0665	-4.469	0.697
40.041	155.25	1.0838	-4.469	0.698
40.115	157.87	1.0959	-4.469	0.694
40.179	160.1	1.0984	-4.469	0.686
40.246	162.16	1.0965	-4.376	0.676
40.304	163.37	1.0938	-4.376	0.67
40.365	164.86	1.0878	-4.376	0.66
40.426	165.98	1.0749	-4.376	0.648
40.493	166.63	1.0586	-4.376	0.635
40.562	166.07	1.0586	-4.283	0.637
40.628	164.58	1.0564	-4.283	0.642
40.691	161.97	0.9321	-4.283	0.575
40.759	159.26	0.7404	-4.283	0.465
40.827	156.56	0.7607	-4.283	0.486
40.892	154.23	0.8133	-4.19	0.527
40.957	152.46	0.8785	-4.19	0.576
41.02	152.83	0.9386	-3.911	0.614
41.084	154.42	0.9734	-3.911	0.63
41.176	156	1.027	-3.911	0.658
41.24	161.5	1.1022	-3.539	0.682
41.276	164.49	1.1574	-3.539	0.704
41.369	170.73	1.29	-3.725	0.756
41.405	172.32	1.3233	-3.725	0.768
41.473	175.21	1.3679	-3.725	0.781
41.539	176.79	1.4044	-3.817	0.794
41.608	178.66	1.4358	-3.817	0.804
41.68	180.9	1.4644	-3.817	0.81
41.747	183.42	1.4879	-3.817	0.811
41.814	185.19	1.5045	-3.725	0.812
41.879	185.47	1.5109	-3.725	0.815
41.945	185.37	1.5122	-3.725	0.816
42.012	185.33	1.5087	-3.725	0.814
42.081	185.33	1.4893	-3.725	0.804
42.144	185.28	1.4692	-3.632	0.793
42.212	187.98	1.4541	-3.725	0.774
42.277	190.22	1.4534	-3.725	0.764
42.342	192.74	1.4531	-3.725	0.754
42.409	195.63	1.4556	-3.725	0.744
42.477	197.5	1.4701	-3.725	0.744
42.546	197.87	1.486	-3.817	0.751
42.616	197.77	1.4986	-3.817	0.758
42.678	197.77	1.5074	-3.817	0.762
42.748	197.77	1.4988	-3.817	0.758
42.813	197.77	1.4894	-3.817	0.753
42.881	200.39	1.4844	-3.817	0.741
42.915	201.88	1.483	-3.817	0.735

43.009	205.51	1.4817	-3.725	0.721
43.047	206.63	1.4801	-3.725	0.716
43.11	206.73	1.4724	-3.725	0.712
43.18	204.21	1.4521	-3.725	0.711
43.248	199.73	1.4265	-3.725	0.714
43.314	191.81	1.4328	-3.632	0.747
43.385	180.62	1.2918	-3.632	0.715
43.459	166.07	1.1155	-3.632	0.672
43.523	150.41	1.4371	-3.632	0.955
43.589	129.43	1.3647	-3.539	1.054
43.658	102.76	1.5611	-3.36	1.519
43.701	76.83	1.6206	-3.181	2.109
43.795	60.42	1.5286	-3.181	2.53
43.863	46.9	1.3994	-3.181	2.984
43.93	37.86	1.2689	-2.98	3.352
43.965	32.82	1.1917	-2.886	3.631
44.037	27.32	0.9921	-2.421	3.631
44.1	25.83	0.8075	-2.049	3.126
44.166	25.18	0.6312	-1.211	2.507
44.236	24.52	0.4401	2.328	1.794
44.306	24.71	0.3015	5.028	1.22
44.368	26.39	0.3582	6.983	1.357
44.436	31.8	0.6079	17.877	1.912
44.504	38.32	0.5574	22.811	1.454
44.571	40.56	0.6085	22.998	1.5
44.641	43.83	0.8565	23.463	1.954
44.705	51.01	1.0827	22.811	2.123
44.767	60.42	1.2892	48.603	2.134
44.83	70.12	1.4808	36.313	2.112
44.892	74.78	1.667	6.331	2.229
44.957	77.86	1.8398	2.793	2.363
45.022	78.98	1.9596	-2.235	2.481
45.094	78.79	2.0111	-4.004	2.552
45.163	79.17	1.976	-3.725	2.496
45.23	80.56	1.8972	-3.817	2.355
45.298	83.18	1.8956	-4.097	2.279
45.364	87.56	1.8754	-4.563	2.142
45.433	96.51	1.8857	-5.028	1.954
45.502	108.07	1.8873	-6.052	1.746
45.571	119.35	1.854	-7.728	1.553
45.606	124.48	1.844	-8.008	1.481
45.673	132.88	1.8467	-8.194	1.39
45.741	140.71	1.8127	-8.38	1.288
45.81	146.58	1.7007	-8.473	1.16
45.879	149.38	1.591	-8.66	1.065
45.944	150.22	1.4781	-8.752	0.984
46.014	150.97	1.3627	-8.752	0.903

46.084	150.69	1.2586	-8.845	0.835
46.153	147.89	1.1887	-8.752	0.804
46.22	142.95	1.1638	-8.845	0.814
46.288	136.33	1.1658	-8.752	0.855
46.359	128.4	1.1635	-8.752	0.906
46.393	125.23	1.1612	-8.845	0.927
46.458	121.13	1.1689	-9.125	0.965
46.531	119.35	1.1518	-9.311	0.965
46.603	118.89	1.09	-9.591	0.917
46.667	118.42	1.0908	-9.497	0.921
46.738	116.93	1.0914	-9.404	0.933
46.806	114.69	1.1074	-9.497	0.966
46.876	112.08	1.1258	-9.404	1.004
46.944	109.19	1.1543	-9.497	1.057
47.014	107.42	1.2208	-9.404	1.136
47.049	106.77	1.2623	-9.404	1.182
47.12	107.51	1.3205	-9.311	1.228
47.189	110.5	1.0812	-9.311	0.978
47.26	115.63	0.6854	-9.218	0.593
47.329	117.4	0.6905	-9.218	0.588
47.402	119.54	0.7433	-9.125	0.622
47.471	121.22	0.8125	-9.218	0.67
47.523	114.04	0.8605	-8.845	0.755
47.584	114.32	0.9113	-8.845	0.797
47.657	117.49	0.9724	-8.845	0.828
47.721	117.68	1.039	-8.566	0.883
47.791	116.37	1.1115	-8.473	0.955
47.855	113.76	1.1652	-8.473	1.024
47.924	109.38	1.2092	-8.473	1.106
47.99	104.62	1.237	-8.473	1.182
48.055	101.08	1.2608	-8.38	1.247
48.126	97.26	1.2758	-8.38	1.312
48.196	94.09	1.2831	-8.38	1.364
48.229	92.31	1.2898	-8.38	1.397
48.296	89.33	1.3212	-8.287	1.479
48.363	85.13	1.3904	-8.38	1.633
48.431	79.17	1.4832	-8.38	1.873
48.503	72.83	1.516	-8.473	2.082
48.568	67.6	1.4953	-8.473	2.212
48.632	62.66	1.4953	-8.473	2.386
48.699	56.97	1.5025	-8.473	2.637
48.764	50.73	1.5397	-8.473	3.035
48.832	43.73	1.4746	-8.473	3.372
48.904	38.98	1.3635	-8.473	3.498
48.973	34.69	1.2828	-8.38	3.698
49.043	34.03	1.2575	-8.287	3.695
49.111	35.99	1.2396	-8.194	3.444

49.18	35.81	1.1668	-8.194	3.259
49.213	34.78	1.1079	-8.101	3.186
49.282	32.17	0.9355	-8.101	2.908
49.354	31.52	0.9293	-8.008	2.949
49.419	33.48	1.0206	-8.008	3.049
49.484	36.27	1.013	-7.914	2.793
49.555	38.14	0.6215	-7.914	1.63
49.626	39.44	0.6249	-7.914	1.584
49.693	41.96	0.6459	-7.914	1.539
49.76	45.97	0.7356	-7.914	1.6
49.829	49.51	0.8952	-7.542	1.808
49.88	46.53	0	-7.542	0
49.945	52.31	0	-7.309	0
50.022	51.94	0	-7.077	0
50.084	51.38	0	-7.17	0
50.147	51.1	0	-7.263	0
50.211	51.29	0	-7.542	0

MAJOR DIVISION			GRAPHIC SYMBOL	LETTER SYMBOL	TYPICAL DESCRIPTIONS
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL, SAND MIXTURES, LITTLE OR NO FINES
				GP	POORLY-GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES
	MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES
	SAND AND SANDY SOILS	CLEAN SAND (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
				SP	POORLY-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	SANDS WITH FINE (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND-SILT MIXTURES
				SC	CLAYEY SANDS, SAND-CLAY MIXTURES
FINE GRAINED SOILS	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

UNIFIED SOIL CLASSIFICATION SYSTEM

KEY:

- ■ Indicates 2.5-inch Inside Diameter. Ring Sample.
- ⊠ Indicates 2-inch OD Split Spoon Sample (SPT).
- ⧅ Indicates Shelby Tube Sample.
- ◫ Indicates No Recovery.
- ◧ Indicates SPT with 140# Hammer 30 in. Drop.
- ⊡ Indicates Bulk Sample.
- ◩ Indicates Small Bag Sample.
- ◨ Indicates Non-Standard
- ⊠ Indicates Core Run.

COMPONENT PROPORTIONS

DESCRIPTIVE TERMS	RANGE OF PROPORTION
Trace	1 - 5%
Few	5 - 10%
Little	10 - 20%
Some	20 - 35%
And	35 - 50%

COMPONENT DEFINITIONS

COMPONENT	SIZE RANGE
Boulders	Larger than 12 in
Cobbles	3 in to 12 in
Gravel	3 in to No 4 (4.5mm)
Coarse gravel	3 in to 3/4 in
Fine gravel	3/4 in to No 4 (4.5mm)
Sand	No. 4 (4.5mm) to No. 200 (0.074mm)
Coarse sand	No. 4 (4.5 mm) to No. 10 (2.0 mm)
Medium sand	No. 10 (2.0 mm) to No. 40 (0.42 mm)
Fine sand	No. 40 (0.42 mm) to No. 200 (0.074 mm)
Silt and Clay	Smaller than No. 200 (0.074 mm)

MOISTURE CONTENT

DRY	Absence of moisture, dusty, dry to the touch.
DAMP	Some perceptible moisture; below optimum
MOIST	No visible water; near optimum moisture content
WET	Visible free water, usually soil is below water table.

RELATIVE DENSITY OR CONSISTENCY VERSUS SPT N -VALUE

COHESIONLESS SOILS		COHESIVE SOILS		
Density	N (blows/ft)	Consistency	N (blows/ft)	Approximate Undrained Shear Strength (psf)
Very Loose	0 to 4	Very Soft	0 to 2	< 250
Loose	4 to 10	Soft	2 to 4	250 - 500
Medium Dense	10 to 30	Medium Stiff	4 to 8	500 - 1000
Dense	30 to 50	Stiff	8 to 15	1000 - 2000
Very Dense	over 50	Very Stiff	15 to 30	2000 - 4000
		Hard	over 30	> 4000

Side Studio
23848-23

Log of Boring B-1

Boring Location: 10145 Artesia Place, Bellflower

Date of Drilling: 4/7/2023 | Groundwater Depth: None Encountered

Drilling Method: Simco 2800HS

Hammer Weight: 140 lbs | Drop: 30"

Surface Elevation:

Depth (feet)	Lith-ology	Material Description	Samples: Type	Samples: Blow Counts	Laboratory: Moisture	Laboratory: Dry Density	Laboratory: Fines Content %
0		4.5 inch Asphaltic concrete					
		FILL					
		Silty (fine to medium grained) SAND					
		Brown, medium dense, moist; with occasional gravel					
		NATURAL					
5		Silty (fine grained) SAND					
		Dark brown, loose, moist			23.7		
		Sandy SILT					
		Dark brown, medium stiff, very moist to wet					
		Boring completed at depth of 5'					
10							
15							
20							
25							
30							
35							

GWT not encountered

SuperLog CivilTech Software, USA www.civiltech.com File: C:\Superlog4\23848-23.log Date: 5/17/2023

NorCal Engineering

Side Studio
23848-23

Log of Boring B-2

Boring Location: 10145 Artesia Place, Bellflower

Date of Drilling: 4/7/2023 | Groundwater Depth: None Encountered

Drilling Method: Simco 2800HS

Hammer Weight: 140 lbs | Drop: 30"

Surface Elevation:

Depth (feet)	Lith-ology	Material Description	Samples: Type	Samples: Blow Counts	Laboratory: Moisture	Laboratory: Dry Density	Laboratory: Fines Content %
0		5 inch Asphaltic concrete					
		FILL					
		Silty (fine to medium grained) SAND					
		Brown, medium dense, moist; with occasional gravel					
		NATURAL					
5		Silty (fine grained) SAND					
		Dark brown, loose, moist					
		Sandy SILT					
		Brown, medium stiff, very moist					
		Clayey SILT					
		Brown, medium stiff, moist					
10		Silty (fine grained) SAND					
		Brown, medium dense, moist	☒		30.8		
		Sandy SILT					
		Olive brown, medium stiff, wet; with some clay					
		Boring completed at depth of 10'					
15							
20							
25							
30							
35							

GWT not encountered

SuperLog CivilTech Software, USA www.civiltech.com File: C:\Superlog4\23848-23.log Date: 5/17/2023

NorCal Engineering

Side Studio
23848-23

Log of Boring B-3

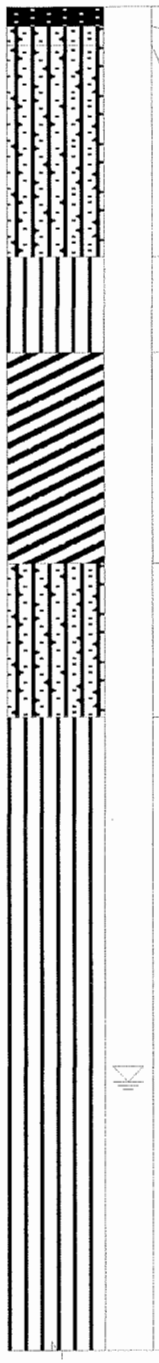
Boring Location: 10145 Artesia Place, Bellflower

Date of Drilling: 4/7/2023 | Groundwater Depth: 28'

Drilling Method: Simco 2800HS

Hammer Weight: 140 lbs | Drop: 30"

Surface Elevation:



Depth (feet)	Material Description	Samples: Type	Samples: Blow Counts	Laboratory: Moisture	Laboratory: Dry Density	Laboratory: Fines Content %
0	4.5 inch Asphaltic concrete					
	FILL Silty (fine to medium grained) SAND Brown, medium dense, moist; with occasional gravel					
	NATURAL Silty (fine grained) SAND Dark brown, medium dense, moist		2/2/2	11.1		35
5	Sandy SILT Brown, medium stiff, very moist					
	Silty CLAY Olive brown, medium stiff, very moist to wet		2/3/4	33.7		89
10						
	Silty (fine to medium grained) SAND Light grey brown, medium dense, moist		6/6/8	6.8		11
15						
	SILT Dark brown, medium stiff, moist to wet; with some sand		3/3/4	33.0		95
20						
			4/3/5	30.0		80
25	Groundwater encountered at 28'					
	Greyish brown at 30'		3/4/4	29.0		85
30						
35						

SuperLog CivilTech Software, USA www.civiltech.com File: C:\Superlog4\23848-23.log Date: 5/17/2023

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Side Studio 23848-23	Log of Boring B-3
Boring Location: 10145 Artesia Place, Bellflower	
Date of Drilling: 4/7/2023	Groundwater Depth: 28'
Drilling Method: Simco 2800HS	
Hammer Weight: 140 lbs	Drop: 30"
Surface Elevation:	

Depth (feet)	Lith-ology	Material Description	Samples: Type	Samples: Blow Counts	Laboratory: Moisture	Laboratory: Dry Density	Laboratory: Fines Content %
35		SILT Greyish brown, medium stiff, wet to saturated with depth; with traces of clay		3/6/4	28.0		84
40		Silty (fine to medium grained) SAND Greyish brown, medium dense, saturated		11/13/15	26.6		9
45		Sandy SILT Greyish brown, medium stiff, very moist		4/7/8	25.9		49
50		Silty CLAY Dark grey, medium stiff, wet		5/6/9	35.7		94
		Boring completed at depth of 51.5'					
55							
60							
65							
70							

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Side Studio
23848-23

Log of Boring B-4

Boring Location: 10145 Artesia Place, Bellflower

Date of Drilling: 4/7/2023 | Groundwater Depth: None Encountered

Drilling Method: Hand Auger

Hammer Weight: | Drop:

Surface Elevation:

Depth (feet)	Lith-ology	Material Description	Samples: Type	Samples: Blow Counts	Laboratory: Moisture	Laboratory: Dry Density	Laboratory: Fines Content %
0		FILL					
		Silty (fine grained) SAND					
		Brown, medium dense, moist; with occasional gravel	■		20.0	86.3	
		NATURAL					
		Silty (fine grained) SAND					
		Brown, loose, moist	■		22.1	95.1	
5		Sandy SILT					
		Brown, medium stiff, very moist					
		Clayey SILT					
		Brown, medium stiff, very moist	■		20.1	98.2	
		Sandy SILT					
		Brown, medium stiff, very moist					
10		Boring completed at depth of 10'					
15							
20							
25							
30							
35							

GWT not encountered

Date: 5/17/2023 File: C:\Superlog4\23848-23.log www.civiltech.com SuperLog CivilTech Software, USA

NorCal Engineering

Side Studio
23848-23

Log of Boring B-5

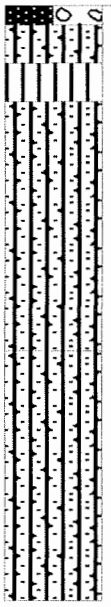
Boring Location: 10145 Artesia Place, Bellflower

Date of Drilling: 4/7/2023 | **Groundwater Depth:** None Encountered

Drilling Method: Simco 2800HS

Hammer Weight: 140 lbs | **Drop:** 30"

Surface Elevation:



Depth (feet)	Lithology	Material Description	Samples: Type	Samples: Blow Counts	Laboratory: Moisture	Laboratory: Dry Density	Laboratory: Fines Content %
0		4 inch Asphaltic concrete over 2 inch base					
		FILL					
		Silty (fine grained) SAND					
		Brown, medium dense, moist; with occasional gravel	■	2/2	25.3	92.2	
		NATURAL					
5		Sandy SILT					
		Dark brown, loose, very moist to wet; with some clay	■	2/3	14.8	96.5	
		Silty (fine grained) SAND					
		Greyish brown, medium stiff, moist					
		Silty (fine to medium grained) SAND					
10		Brown, medium dense, damp to moist	■	6/9	7.7	95.6	
15			■	11/19	8.9	97.6	
		Boring completed at depth of 15.5'					
20							
25							
30							
35							

SuperLog CivilTech Software, USA www.civiltech.com File: C:\Superlog\123848-23.log Date: 5/17/2023

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Appendix B
Laboratory Tests

TABLE I
MAXIMUM DENSITY TESTS

Sample	Classification	Optimum Moisture (%)	Maximum Dry Density (lbs/cu.ft)
B-1 @ 2'	Silty Fine SAND	12.5	110.0

TABLE II
EXPANSION TESTS

Sample	Classification	Expansion Index
B-3 @ 2'	Silty Fine SAND	09

TABLE III
ATTERBERG LIMITS

Sample	Liquid Limit	Plastic Limit	Plasticity Index
B-1 @ 10'	45	25	20
B-1 @ 20'	30	25	5
B-1 @ 30'	29	25	4
B-1 @ 35'	28	26	2

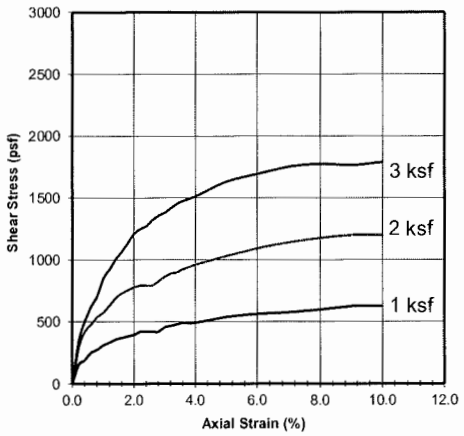
TABLE IV
CORROSION TESTS

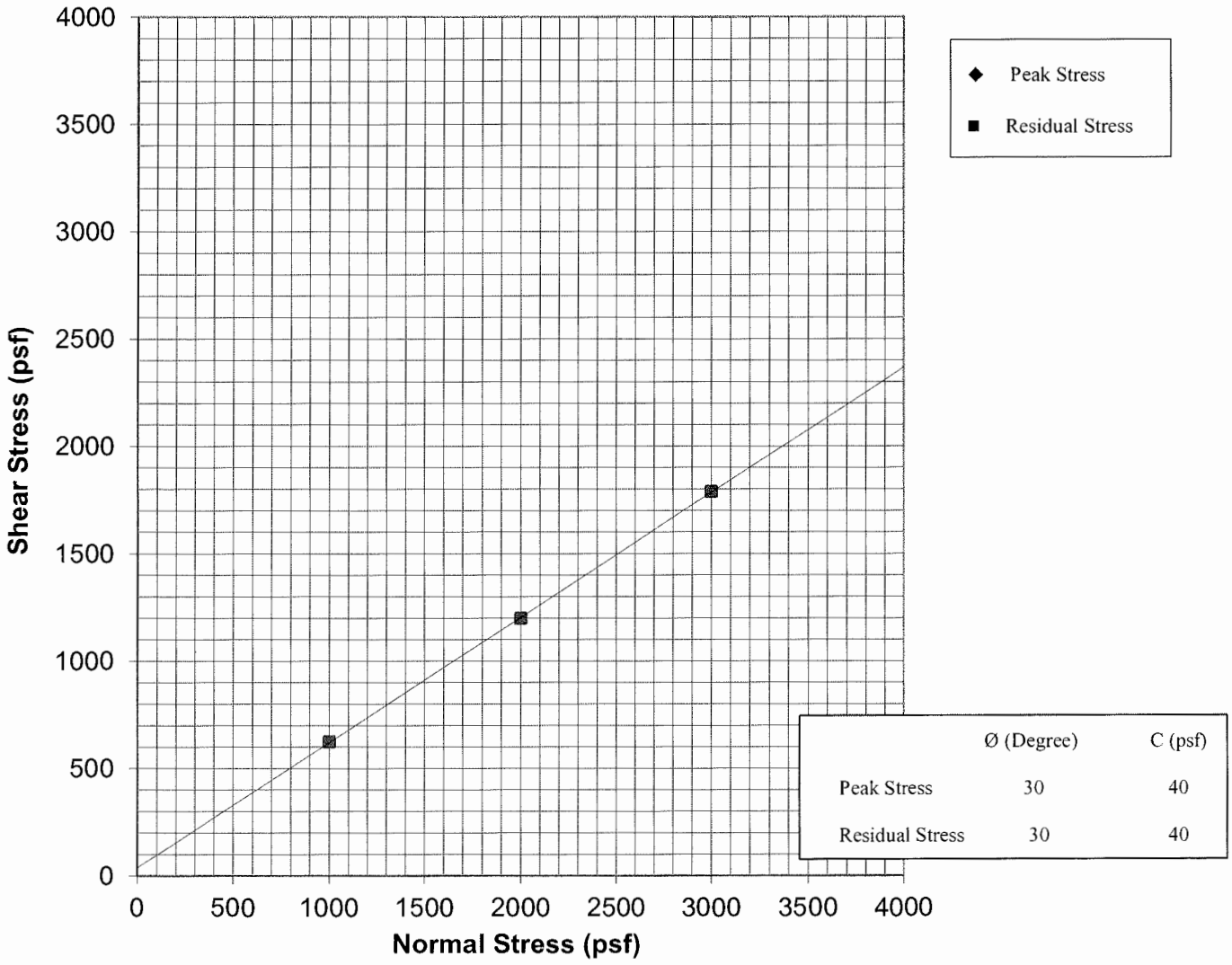
Sample	pH	Electrical Resistivity	Sulfate (%)	Chloride (ppm)
B-4 @ 2'	7.7	4,175	0.0008	201

% by weight
ppm – mg/kg

Sample No.	B4@2'
Sample Type:	Undisturbed/Saturated
Soil Description:	Silty Fine Grained Sand

		1	2	3
Normal Stress	(psf)	1000	2000	3000
Peak Stress	(psf)	624	1200	1788
Displacement	(in)	0.225	0.225	0.250
Residual Stress	(psf)	624	1200	1788
Displacement	(in.)	0.250	0.250	0.250
In Situ Dry Density	(pcf)	86.3	86.3	86.3
In Situ Water Content	(%)	20.0	20.0	20.0
Saturated Water Content	(%)	35.2	35.2	35.2
Strain Rate	(in/min)	0.020	0.020	0.020





	Ø (Degree)	C (psf)
Peak Stress	30	40
Residual Stress	30	40

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Side Studio

PROJECT NUMBER: 23848-23 DATE: 4/28/2023

DIRECT SHEAR TEST

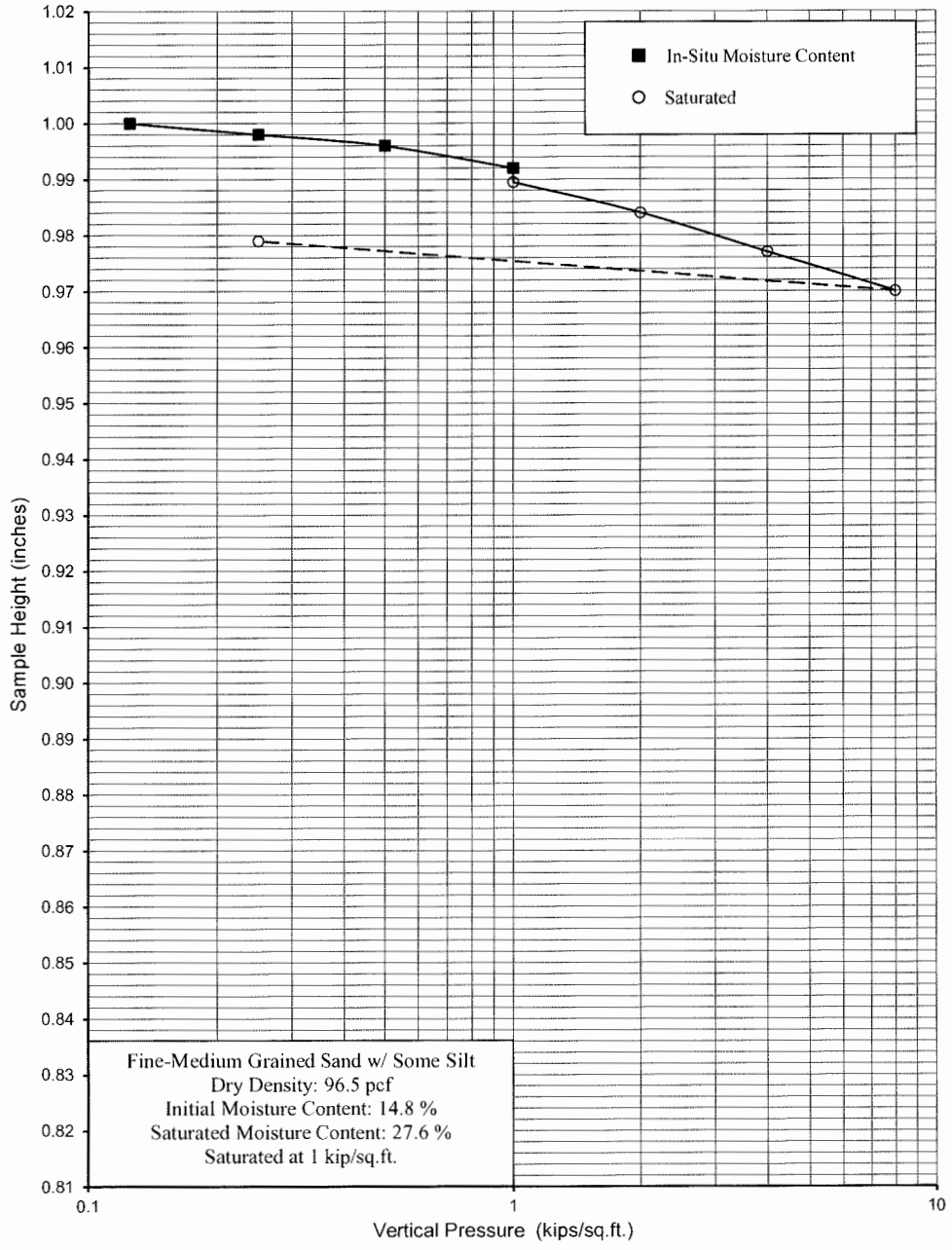
ASTM D3080

Plate A

Vertical Pressure (kips/sq.ft.)	Sample Height (inches)	Consolidation (percent)	
0.125	1.0000	0.0	
0.25	0.9980	0.2	
0.5	0.9960	0.4	
1	0.9920	0.8	
1	0.9895	1.1	
2	0.9840	1.6	
4	0.9770	2.3	
8	0.9700	3.0	
0.25	0.9790	2.1	Saturated

Sample No.	B5	Depth	5'	Date	4/28/2023

Date Tested: 4/25/2023
Sample: B5
Depth: 5'



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PROJECT NUMBER: 23848-23 DATE: 4/28/2023

CONSOLIDATION TEST

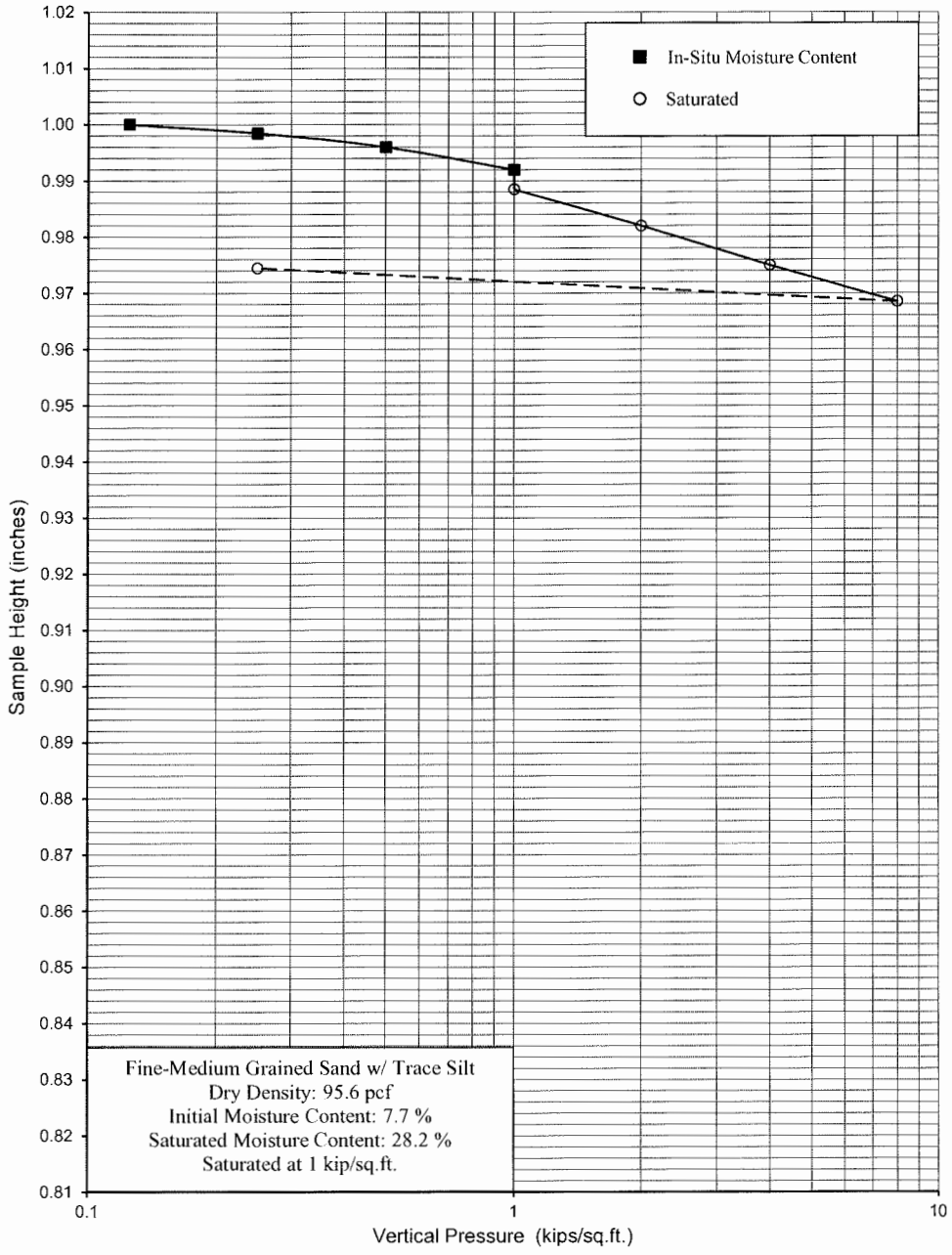
ASTM D2435

Plate B

Vertical Pressure (kips/sq.ft.)	Sample Height (inches)	Consolidation (percent)	
0.125	1.0000	0.0	
0.25	0.9985	0.2	
0.5	0.9960	0.4	
1	0.9920	0.8	
1	0.9885	1.2	
2	0.9820	1.8	
4	0.9750	2.5	
8	0.9685	3.2	
0.25	0.9745	2.6	Saturated

Sample No.	B5
Depth	10'
Date	4/28/2023

Date Tested: 4/25/2023
Sample: B5
Depth: 10'



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SOILS AND GEOTECHNICAL CONSULTANTS

Side Studio

PROJECT NUMBER: 23848-23 DATE: 4/28/2023

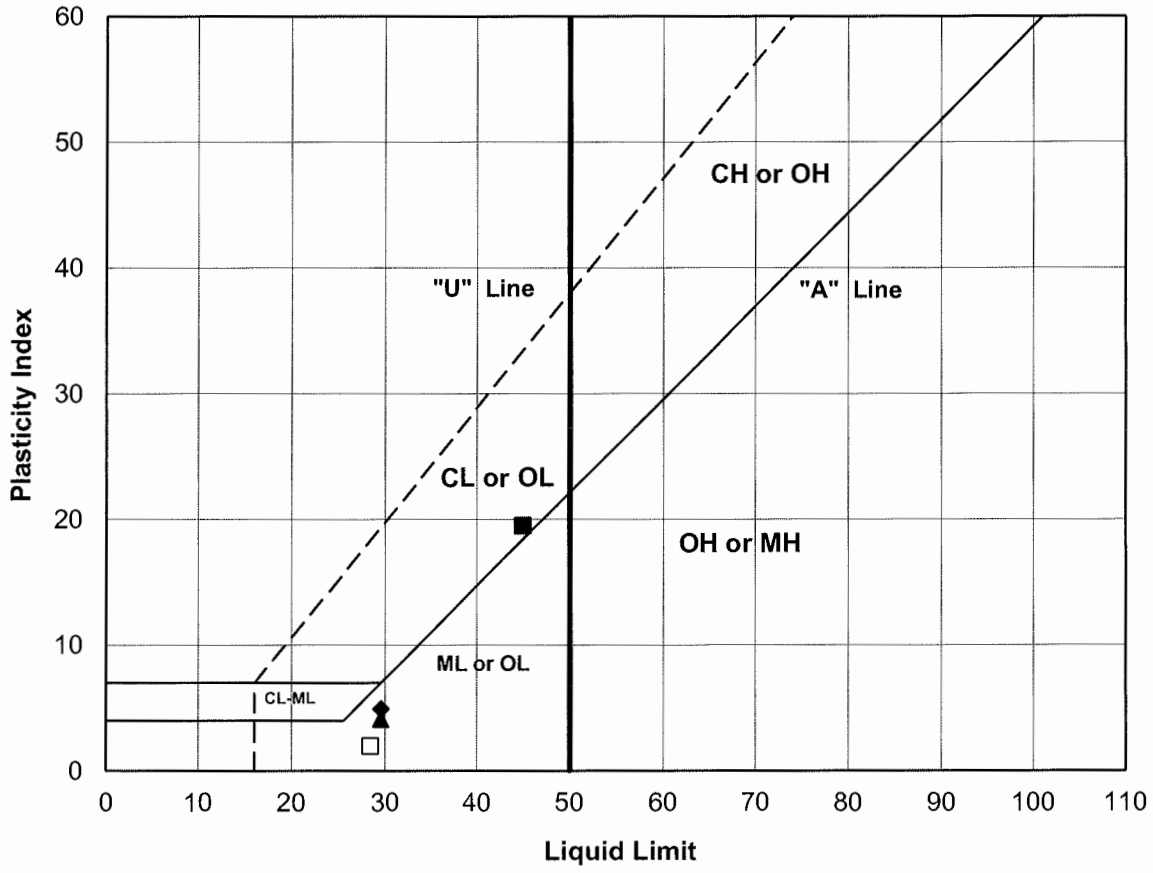
CONSOLIDATION TEST

ASTM D2435

Plate C

PLASTICITY INDEX

ASTM D4318



Symbol	Sample	Depth	LL	PL	PI	USCS	Soil Description
■	B3	10'	**45**	**25**	**20**	ML	Silt
◆	B3	20'	**30**	**25**	**5**	ML	Silt
▲	B3	30'	**29**	**25**	**4**	ML	Silt
□	B3	35'	**28**	**26**	**2**	ML	Silt
◇							
△							

NorCal Engineering

SOILS AND GEOTECHNICAL CONSULTANTS

Side Studio

PROJECT NUMBER: 23848-23 DATE: 4/28/2023

PLASTICITY INDEX

ASTM D4318

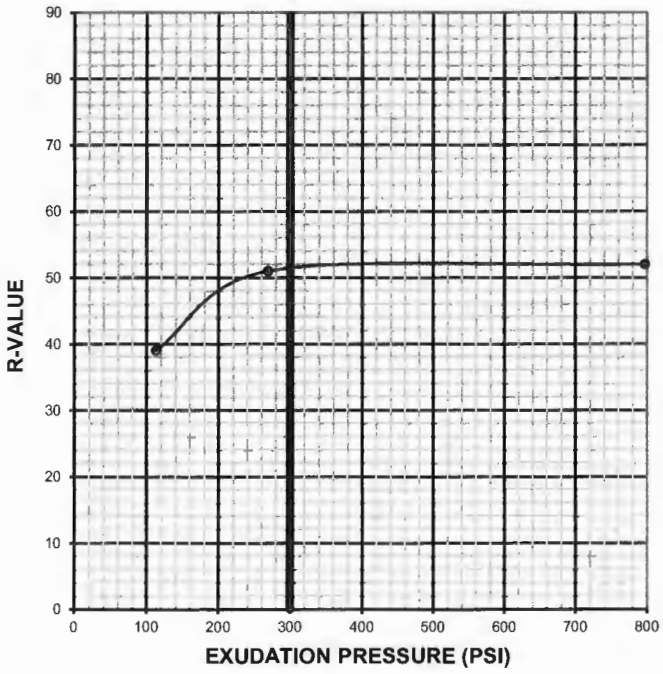
R-VALUE TEST REPORT

☑ CT-301 ☐ ASTM-D2844

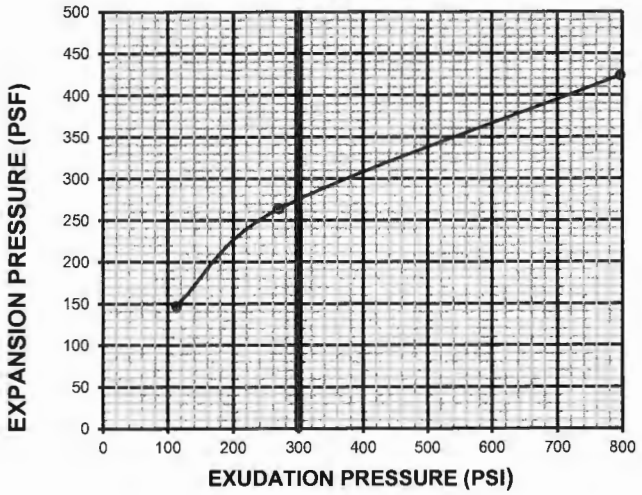
PROJECT NAME:	Norcal: Side Studio (23848-23)	PROJECT NUMBER:	L-230401
SAMPLE LOCATION:	10145 Artesia Place, Bellflower	SAMPLE NUMBER:	B1 (23848-23)
SAMPLE DESCRIPTION:	SANDY SILT (ML), dark gray	SAMPLE DEPTH:	2'
SAMPLED BY:	Norcal 4/07/23	TESTED BY:	JPG
		DATE TESTED:	4/26/2023

TEST SPECIMEN	A	B	C
MOISTURE AT COMPACTION %	19.5	18.3	17.1
WEIGHT OF SAMPLE, grams	967	1056	1037
HEIGHT OF SAMPLE, Inches	2.36	2.59	2.47
DRY DENSITY, pcf	104.0	104.4	108.7
COMPACTOR AIR PRESSURE, psi	200	200	250
EXUDATION PRESSURE, psi	113	269	797
EXPANSION, Inches x 10exp-4	34	61	98
STABILITY Ph 2,000 lbs (160 psi)	62	54	50
TURNS DISPLACEMENT	5.20	5.17	5.10
R-VALUE UNCORRECTED	43	49	52
R-VALUE CORRECTED	39	51	52
EXPANSION PRESSURE (psf)	146.9	263.5	423.4

R-VALUE VS. EXUDATION PRESSURE



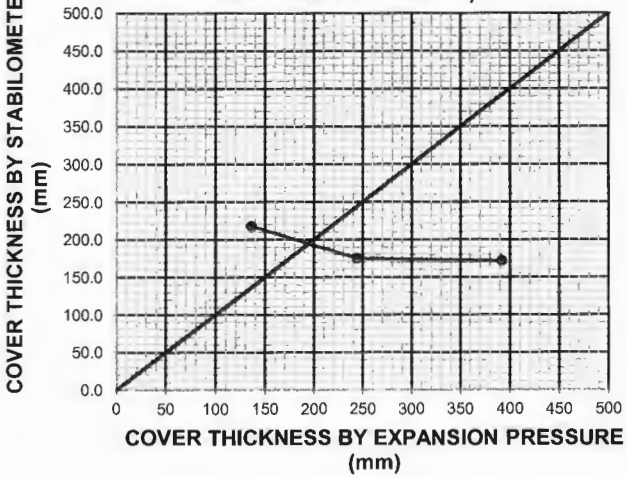
EXPANSION PRESSURE VS. EXUDATION PRESSURE



R-VALUE AT EQUILIBRIUM:	44

R-VALUE BY EXUDATION PRESSURE:	51
R-VALUE BY EXPANSION PRESSURE:	44
EXPANSION PRESSURE AT 300 PSI EXUDATION:	275
TRAFFIC INDEX (Assumed):	5.5
GRAVEL FACTOR (Assumed):	1.5
UNIT MASS OF COVER MATERIAL, kg/m^3 (Assumed):	2100.0

COVER THICKNESS (STABILOMETER BY EXPANSION PRESSURE)



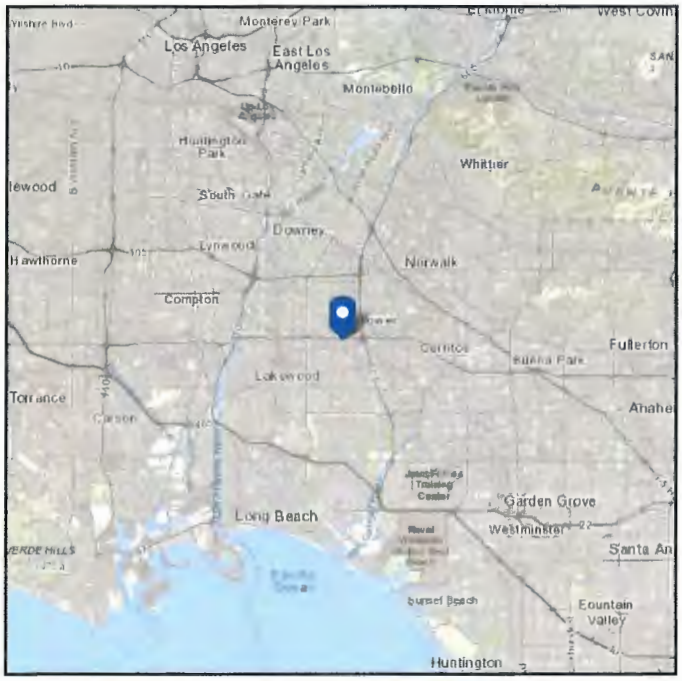
Appendix C
ASCE Seismic Hazards Report

ASCE 7 Hazards Report

Address:
10145 Artesia Pl
Bellflower, California
90706

Standard: ASCE/SEI 7-16
Risk Category: II
Soil Class: D - Stiff Soil

Latitude: 33.875248
Longitude: -118.117597
Elevation: 65.49595118707772 ft (NAVD 88)



Seismic

Site Soil Class: D - Stiff Soil

Results:

S_S :	1.571	S_{D1} :	N/A
S_1 :	0.562	T_L :	8
F_a :	1	PGA :	0.671
F_v :	N/A	PGA_M :	0.738
S_{MS} :	1.571	F_{PGA} :	1.1
S_{M1} :	N/A	I_e :	1
S_{DS} :	1.047	C_v :	1.414

Ground motion hazard analysis may be required. See ASCE/SEI 7-16 Section 11.4.8.

Data Accessed: Mon May 15 2023

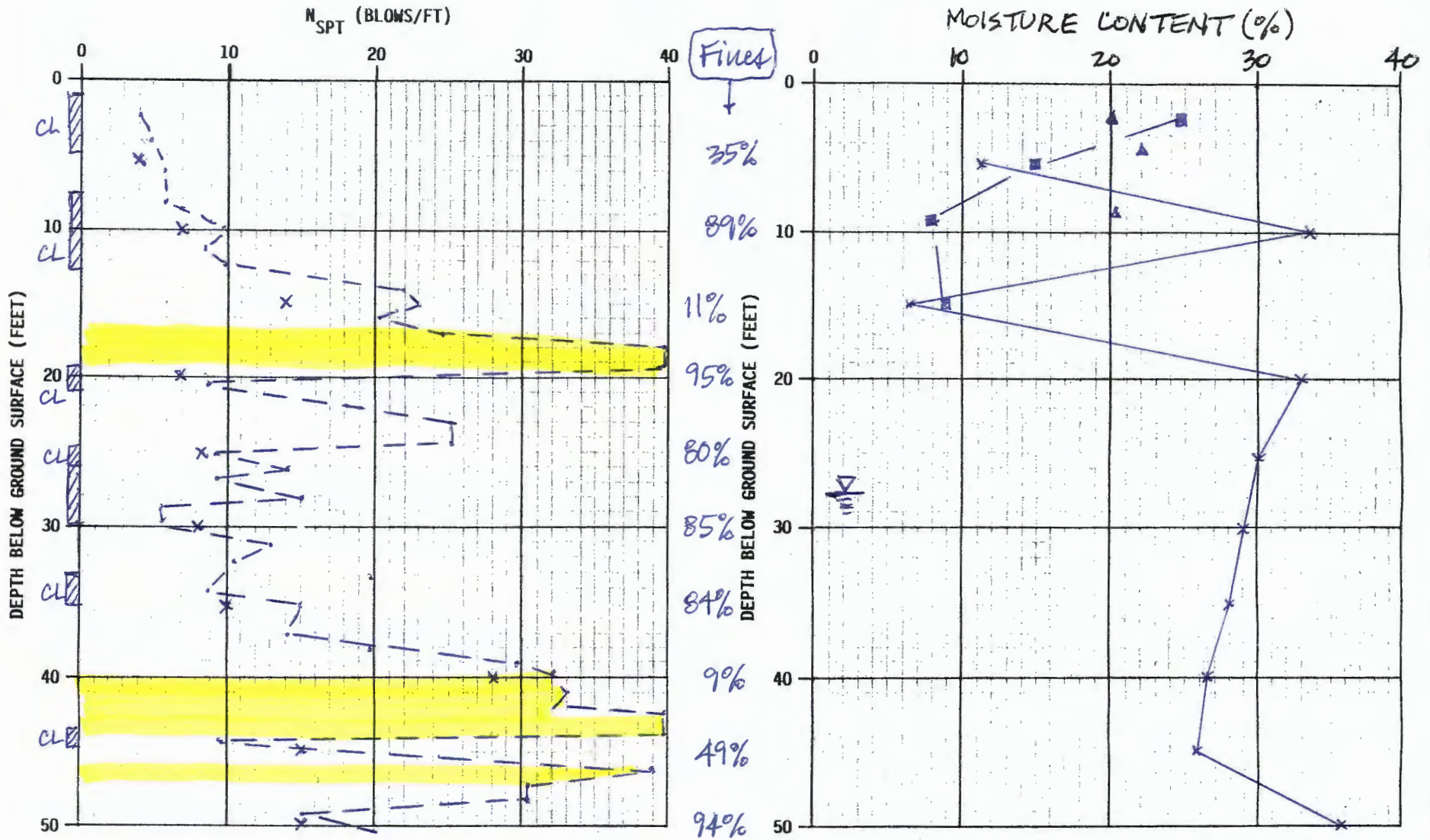
Date Source: USGS Seismic Design Maps

The ASCE 7 Hazard Tool is provided for your convenience, for informational purposes only, and is provided "as is" and without warranties of any kind. The location data included herein has been obtained from information developed, produced, and maintained by third party providers; or has been extrapolated from maps incorporated in the ASCE 7 standard. While ASCE has made every effort to use data obtained from reliable sources or methodologies, ASCE does not make any representations or warranties as to the accuracy, completeness, reliability, currency, or quality of any data provided herein. Any third-party links provided by this Tool should not be construed as an endorsement, affiliation, relationship, or sponsorship of such third-party content by or from ASCE.

ASCE does not intend, nor should anyone interpret, the results provided by this Tool to replace the sound judgment of a competent professional, having knowledge and experience in the appropriate field(s) of practice, nor to substitute for the standard of care required of such professionals in interpreting and applying the contents of this Tool or the ASCE 7 standard.

In using this Tool, you expressly assume all risks associated with your use. Under no circumstances shall ASCE or its officers, directors, employees, members, affiliates, or agents be liable to you or any other person for any direct, indirect, special, incidental, or consequential damages arising from or related to your use of, or reliance on, the Tool or any information obtained therein. To the fullest extent permitted by law, you agree to release and hold harmless ASCE from any and all liability of any nature arising out of or resulting from any use of data provided by the ASCE 7 Hazard Tool.

Appendix D
Liquefaction Calculations



NorCal Engineering
SOILS AND GEOTECHNICAL CONSULTANTS

PROJECT 23848-23 | DATE MAY, 2023

STANDARD PENETRATION TEST (SPT)
RESULTS AND MOISTURE
CONTENT VERSUS DEPTH

CPT-1

SITE LOCATION: _____ DEPTH TO WATER TABLE = 8'

GEOTECHNICAL REPORT: _____ EARTHQUAKE MAGNITUDE = 6.9

GEOLOGY REPORT: _____ PEAK GROUND ACCELERATION = 0.74g

DEPTH BELOW FINAL GRADE (FEET)	MOIST DENSITY (PCF)	σ_o TOTAL STRESS (PSF)	$\bar{\sigma}_o$ EFFECTIVE STRESS (PSF)	$\sigma_o/\bar{\sigma}_o$ (-)	r_d (-)	① $\tau_h/\bar{\sigma}_o$ (-)	N VALUE (BLOWS/FT)	RELATIVE DENSITY (%)	C_N (-)	C_E (-)	C_B (-)	C_R (-)	C_S (-)	$(N_1)_{60}$ (BLOWS/ft)	FINES (%)	CRR M=7.5	MSF (-)	CRR M=6.9	LIQ. F.S.
0-5		575	Same	1.0	0.99	0.48	4	50	>1.6	1.00	1.00	1.00	1.00	>6.5	>50	>0.14	1.3	>0.18	>0.4
5-8					0.98	0.50	6	55	>1.6					>10	35	>0.19		>0.25	>0.5
8-12		1150	1025	1.12	0.96	0.52	9	60	1.6					14.5	89	>0.25		>0.33	>0.7 (NL)
12-16		1725	1288	1.34	0.92	0.59	20	85	1.4					28	11	>0.50		>0.65	>1.1
16-20		2325	1576	1.48	0.87	0.62	36	>90	1.2					43	11	>0.50		>0.65	>1.1
20-21					0.86	0.61	9	50	1.1					10	95	>0.19		>0.25	>0.4
21-25		2925	1864	1.57	0.80	0.60	24	80	1.05					25	<35	>0.50		>0.65	>1.1
25-29					0.75	0.59	12	60	1.0					12	80	>0.21		>0.27	>0.5
29-30		3525	2152	1.64	0.74	0.58	6	45	0.96					6	85	>0.14		>0.18	>0.3
30-33					0.70	0.57	11	55	0.92					10	84	>0.19		>0.25	>0.4

① INDUCED CYCLIC STRESS RATIO = $\tau_{ave}/\bar{\sigma}_o = 0.65 \cdot \frac{a_{max}}{g} \cdot \frac{\sigma_o}{\bar{\sigma}_o} \cdot r_d$

- C_E = Corr. - Energy Ratio = Energy Ratio / 60%
- C_B = Corr. - Borehole Dia. = 1.15 for 8" dia. borehole
- C_R = Corr. - Rod Length
- C_S = Corr. - Sampling Method

Actual Energy Ratio = 0.67-1.17 (Safety Hammer)
= 0.50-1.00 (Donut Hammer)

Sampling Method = 1.0 Standard sampler
= 1.2 ~~Sampler w/o liners~~

NorCal Engineering
SOILS AND GEOTECHNICAL CONSULTANTS

PROJECT | DATE

EVALUATION OF LIQUEFACTION POTENTIAL

CPT-1

SITE LOCATION: _____

GEOTECHNICAL REPORT: _____

GEOLOGY REPORT: _____

DEPTH TO WATER TABLE = _____

EARTHQUAKE MAGNITUDE = _____

PEAK GROUND ACCELERATION = _____

DEPTH BELOW FINAL GRADE (FEET)	MOIST DENSITY (PCF)	σ_o TOTAL STRESS (PSF)	$\bar{\sigma}_o$ EFFECTIVE STRESS (PSF)	$\sigma_o/\bar{\sigma}_o$ (-)	r_d (-)	① $\tau_h/\bar{\sigma}_o$ (-)	N VALUE (BLOWS/FT)	RELATIVE DENSITY (%)	C_N (-)	C_E (-)	C_B (-)	C_R (-)	C_S (-)	$(N_1)_{60}$ (BLOWS/FT)	FINES (%)	CRR M=7.5	MSF (-)	CRR M=6.9	LIQ. F.S.
33-34					0.69	0.56	9	50	0.90	1.00	1.00	1.00	1.00	8	84	>0.17	1.3	>0.22	>0.4
34-36		4125	2440	1.69	0.68	0.55	14	60	0.87					12	>50	>0.21		>0.27	>0.5
36-44		4725	2728	1.73	0.64	0.53	33	85	0.82					27	9	0.48		0.62	1.2
44-45		5325	3016	1.77	0.61	0.52	10	50	0.80					8	49	>0.17		>0.22	>0.4
45-48					0.59	0.51	30	80	0.78					23.5	<35	>0.50		>0.65	>1.3
48-50		5925	3304	1.79	0.58	0.50	20	65	0.77					15.5	94	>0.26		>0.34	>0.7

① INDUCED CYCLIC STRESS RATIO = $\tau_{ave}/\bar{\sigma}_o = 0.65 \cdot \frac{a_{max}}{g} \cdot \frac{\sigma_o}{\bar{\sigma}_o} \cdot r_d$

- C_E = Corr. - Energy Ratio = Energy Ratio / 60%
- C_B = Corr. - Borehole Dia. = 1.15 for 8" dia. borehole
- C_R = Corr. - Rod Length
- C_S = Corr. - Sampling Method

Actual Energy Ratio = 0.67-1.17 (Safety Hammer)
= 0.50-1.00 (Donut Hammer)

Sampling Method = 1.0 Standard sampler
= ~~1.2 Sampler W/o liners~~

NorCal Engineering
SOILS AND GEOTECHNICAL CONSULTANTS

PROJECT | DATE

EVALUATION OF LIQUEFACTION POTENTIAL

SEISMIC SETTLEMENT EVALUATION ⇒ GWT @ 8' | CPT-1

EQ Magnitude = 6.9, Hor. Ground Acceleration = 0.74g

Depth (ft)	$N_{1,60}$ (Blows/ft)	Fines (%)	EQ CSR	M_{design} / $M_{7.5}$	Design CSR	Vert. Strain	Seismic Settle	Liquefaction F.S.
8-12'	14.5 (22)	89 (5)	0.52	1.30	0.39	1.4%	0.7" ×	>0.7 (NL)
20-21'	10 (15)	95 (5)	0.61		0.47	1.9%	0.2"	>0.4
25-29'	12 (18)	80 (5)	0.59		0.46	1.7%	0.8"	>0.5
29-30'	6 (11)	85 (5)	0.58		0.45	2.4%	0.3"	>0.3
30-33'	10 (15)	84 (5)	0.57		0.44	1.9%	0.7"	>0.4
33-34'	8 (13)	84 (5)	0.56		0.43	2.1%	0.3"	>0.4
34-36'	12 (18)	>50 (5)	0.55		0.42	1.7%	0.4"	>0.5
44-45'	8 (13)	49 (5)	0.52		0.39	2.1%	0.2"	>0.4
48-50'	15.5 (23.5)	94 (5)	0.50		0.38	1.3%	0.3"	>0.7
							Σ = 3.2"	

NL - Non liquefiable soil layers with LL > 39% and PI > 18%

Say Δ_{EQ} < 3¼" ←

NorCal Engineering
SOILS AND GEOTECHNICAL CONSULTANTS

DATE

B-3

SITE LOCATION: _____ DEPTH TO WATER TABLE = 8'

GEOTECHNICAL REPORT: _____ EARTHQUAKE MAGNITUDE = 6.9

GEOLOGY REPORT: _____ PEAK GROUND ACCELERATION = 0.74g

DEPTH BELOW FINAL GRADE (FEET)	MOIST DENSITY (PCF)	σ_o TOTAL STRESS (PSF)	$\bar{\sigma}_o$ EFFECTIVE STRESS (PSF)	$\sigma_o/\bar{\sigma}_o$ (-)	r_d (-)	① $\tau_h/\bar{\sigma}_o$ (-)	N VALUE (BLOWS/FT)	RELATIVE DENSITY (%)	C_N (-)	C_E (-)	C_B (-)	C_R (-)	C_S (-)	$(N_1)_{60}$ (BLOWS/FT)	FINES (%)	CRR M=7.5	MSF (-)	CRR M=6.9	LIQ. F.S.
5	115	575	Same	1.00	0.99	0.48	4	50	>1.6	1.00	1.05	0.70	1.20	>5.5	35	>0.13	1.3	>0.17	>0.4
10	110	1150	1025	1.12	0.96	0.52	7	55	1.35			0.75		9	89	>0.18		>0.23	>0.5
15	↓	1725	1288	1.34	0.92	0.59	14	70	1.2			0.85		18	11	0.23		0.30	0.5
20	120	2325	1576	1.48	0.87	0.62	7	50	1.1			0.90		9	95	>0.17		>0.22	>0.4
25		2925	1864	1.57	0.80	0.60	8	50	1.03			0.95		10	80	>0.19		>0.25	>0.4
30		3525	2152	1.64	0.74	0.58	8	50	0.96			1.00		10	85	>0.19		>0.25	>0.4
35		4125	2440	1.69	0.68	0.55	10	55	0.90					11	84	>0.20		>0.26	>0.5
40		4725	2728	1.73	0.64	0.53	28	80	0.88					31	9	>0.50		>0.65	>1.2
45		5325	3016	1.77	0.61	0.52	15	60	0.84					16	49	>0.27		>0.35	>0.7
50	↓	5925	3304	1.79	0.58	0.50	15	60	0.81	↓	↓	↓	↓	15	94	>0.26	↓	>0.34	>0.7

① INDUCED CYCLIC STRESS RATIO = $\tau_{ave}/\bar{\sigma}_o = 0.65 \cdot \frac{a_{max}}{g} \cdot \frac{\sigma_o}{\bar{\sigma}_o} \cdot r_d$

- C_E = Corr. - Energy Ratio = Energy Ratio / 60%
- C_B = Corr. - Borehole Dia. = 1.15 for 8" dia. borehole
- C_R = Corr. - Rod Length
- C_S = Corr. - Sampling Method

Actual Energy Ratio = 0.67-1.17 (Safety Hammer)
= 0.50-1.00 (Donut Hammer)

Sampling Method = 1.0 Standard sampler
= 1.2 ~~Sampler W/o liners~~

NorCal Engineering
SOILS AND GEOTECHNICAL CONSULTANTS

PROJECT | DATE

EVALUATION OF LIQUEFACTION POTENTIAL

SEISMIC SETTLEMENT EVALUATION ⇒ GWT @ 8'

B-3

EQ Magnitude = 6.9, Hor. Ground Acceleration = 0.74g

Depth (ft)	$N_{1,60}$ (Blows/ft)	Fines (%)	EQ CSR	M_{design} $M_{7.5}$	Design CSR	Vert. Strain	Seismic Settle	Liquefaction F.S.
8-10	9 (14)	89 (5)	0.52	1.3	0.40	2.0%	0.5" X	>0.5 (NL)
10-15	18 (19)	11 (5)	0.59		0.45	1.7%	1.0"	0.5
15-20	9 (14)	95 (5)	0.62		0.48	2.0%	1.2"	>0.4
20-25	10 (15)	80 (5)	0.60		0.46	1.9%	1.1"	>0.4
25-30	10 (15)	85 (5)	0.58		0.44	1.9%	1.1"	>0.4
30-35	11 (17)	84 (5)	0.55		0.42	1.8%	1.1"	>0.5
40-45	16 (24)	49 (5)	0.52		0.40	1.3%	0.8"	>0.7
45-50	15 (22.5)	94 (5)	0.50		0.38	1.4%	0.8"	>0.7

$\Sigma S = 7.1"$

Say $\Delta_{EQ} \approx 7"$ ←

NL - Non liquefiable soil layers with LL > 39% and PL > 18%

Appendix E
Soil Infiltration Data

NORCAL ENGINEERING
SOILS AND GEOTECHNICAL CONSULTANTS

PERCOLATION TEST DATA

Client: Side Studio	**Tested By:** J.S.
Project No.: 23848-23	**Date Tested:** 4/7/2023
Test Hole: 1	**Caving:**
Depth of Test Hole: 5' (60")	**Notes:**
Diameter of Test Hole: 6"	
Date Excavated: 4/7/2023	

PRE-SOAK

TIME	PRE-SOAK NO.	TIME INTERVAL	TOTAL ELAPSED TIME	INITIAL WATER LEVEL	FINAL WATER LEVEL	CHANGE IN WATER LEVEL
7:45	1	30	30	48.0	58.0	10.0
8:15						
8:15	2	30	60	48.0	58.0	10.0
8:45						

PERCOLATION TEST

TIME	TEST NO.	TIME INTERVAL	TOTAL ELAPSED TIME	INITIAL WATER LEVEL	FINAL WATER LEVEL	CHANGE IN WATER LEVEL
12:45	1	30	30	48.0	58.0	10.0
1:15						
1:15	2	30	60	48.0	58.0	10.0
1:45						
1:45	3	30	90	48.0	58.0	10.0
2:15						
2:15	4	30	120	48.0	58.0	10.0
2:45						
2:45	5	30	150	48.0	58.0	10.0
3:15						
3:15	6	30	180	48.0	58.0	10.0
3:45						
3:45	7	30	210	48.0	58.0	10.0
4:15						
4:15	8	30	240	48.0	58.0	10.0
4:45						

NORCAL ENGINEERING
SOILS AND GEOTECHNICAL CONSULTANTS

PERCOLATION TEST DATA

Client: Side Studio	**Tested By:** J.S.
Project No.: 23848-23	**Date Tested:** 4/7/2023
Test Hole: 2	**Caving:**
Depth of Test Hole: 10' (120")	**Notes:**
Diameter of Test Hole: 6"	
Date Excavated: 4/7/2023	

PRE-SOAK

TIME	PRE-SOAK NO.	TIME INTERVAL	TOTAL ELAPSED TIME	INITIAL WATER LEVEL	FINAL WATER LEVEL	CHANGE IN WATER LEVEL
8:03	1	30	30	107.0	113.0	6.0
8:33						
8:33	2	30	60	107.0	113.0	6.0
9:03						

PERCOLATION TEST

TIME	TEST NO.	TIME INTERVAL	TOTAL ELAPSED TIME	INITIAL WATER LEVEL	FINAL WATER LEVEL	CHANGE IN WATER LEVEL
1:10	1	30	30	108.0	113.5	5.5
1:40						
1:40	2	30	60	108.0	113.5	5.5
2:10						
2:10	3	30	90	108.0	113.0	5.0
2:40						
2:40	4	30	120	108.0	112.5	4.5
3:10						
3:10	5	30	150	108.0	112.5	4.5
3:40						
3:40	6	30	180	108.0	112.5	4.5
4:10						
4:10	7	30	210	108.0	112.5	4.5
4:40						
4:40	8	30	240	108.0	112.5	4.5
5:10						

SOIL INFILTRATION RATE CALCS ⇒ Auger Boring

Location:	B-1	B-2
• Depth =	5.0'	10.0'
• Hole Dia. =	6"	6"
• Drop = Δd	10"	4.5"
• Time = Δt Interval	30 min	30 min
• Preadjusted Perc. Rate	20 in/hr	9 in/hr
• Initial Water Depth = d_i	12"	12"
• Reduction Factor = R_f	3.33	4.25
• INFILTRATION RATE	6.0 in/hr	2.1 in/hr

$$\text{Infiltration Rate} = \frac{\text{Preadjusted Perc. Rate}}{\text{Reduction Factor}}$$

$$\text{Reduction Factor} = R_f = \left[\frac{2 \cdot d_i - \Delta d}{\text{Dia.}}\right] + 1$$

NorCal Engineering
SOILS AND GEOTECHNICAL CONSULTANTS

DATE

SOIL INFILTRATION RATE CALCULATIONS

APPENDIX C – AB 52 CONSULTATION

The City of Bellflower
Families. Businesses. Futures.
16600 Civic Center Drive, Bellflower, CA 90706
Tel 562.804.1424 Fax 562.925.8660 www.bellflower.org

June 17, 2024

CERTIFIED MAIL RECEIPT / RETURN RECEIPT REQUESTED
9214 8901 9403 8300 0064 5917 65
Email: admin@gabrielenoindians.org

Gabrieleno Band of Mission Indians - Kizh Nation
Chairperson Andrew Salas
P.O. Box 393
Covina, CA, 91723

Re: Native American Tribal Consultation, Pursuant to the Assembly Bill 52 (AB 52), Amendments to the California Environmental Quality Act (CEQA) (Chapter 532, Statutes of 2014), Public Resources Code Sections 5097.94 (m), 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2 and 21084.3, Bellflower Somerset Mutual Water Company Office and Service Buildings Project at 10145 Artesia Place, Bellflower CA 90706

Dear Chairperson Andrew Salas:

In accordance with AB 52, the City of Bellflower is consulting with your tribal government to ensure the protection of California Native American Cultural Resources and involve your tribal government in the land use planning process for the above referenced project. In the "Tribal Consultation Guidelines" issued by the Governor's Office of Planning and Research, early consultation with tribes is encouraged to acquire input on potential impacts.

The City of Bellflower is preparing a Negative Declaration, in accordance with the California Environmental Quality Act (CEQA) for a proposed 4,842-square foot office building and a 7,219-square foot service building with a 1,096-square foot mezzanine. A new trash enclosure and emergency backup generator are also proposed, along with other site improvements including property fences, landscaping, site lighting, drive-aisles and rework of the existing non-accessible curb ramp. The subject site is located at 10145 Artesia Place, within the M-1 (Light Industrial) District. Attached for your reference is a vicinity aerial photo illustrating the location of the subject site.

In accordance with the provisions of AB 52, please provide any input or desire for further consultation. Pursuant to PRC § 21080.3.1 (b), you have 30 days from the receipt of this letter to request consultation, in writing. We are respectfully requesting your input as soon as possible. If you have any cultural-related concerns, please address them to:

City of Bellflower
Attention: Rowena Genilo-Concepcion
16600 Civic Center Drive
Bellflower, CA 90706
(562) 804-1424, extension 2228
Email: rgenilo@bellflower.org

We appreciate your efforts regarding the proposed project.

Sincerely,

rgconcepcion

Rowena Genilo-Concepcion
Planning Manager

Attachment:
Vicinity Aerial Photo

The City of Bellflower
Families. Businesses. Futures.
16600 Civic Center Drive, Bellflower, CA 90706
Tel 562.804.1424 Fax 562.925.8660 www.bellflower.org

June 17, 2024

CERTIFIED MAIL RECEIPT / RETURN RECEIPT REQUESTED
9214 8901 9403 8364 5919 70
Email: admin@gabrielenoindians.org

Gabrieleno Band of Mission Indians - Kizh Nation
Secretary Christina Swindall Martinez
P.O. Box 393
Covina, CA, 91723

Re: Native American Tribal Consultation, Pursuant to the Assembly Bill 52 (AB 52), Amendments to the California Environmental Quality Act (CEQA) (Chapter 532, Statutes of 2014), Public Resources Code Sections 5097.94 (m), 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2 and 21084.3, Bellflower Somerset Mutual Water Company Office and Service Buildings Project at 10145 Artesia Place, Bellflower CA 90706

Dear Secretary Christina Swindall Martinez:

In accordance with AB 52, the City of Bellflower is consulting with your tribal government to ensure the protection of California Native American Cultural Resources and involve your tribal government in the land use planning process for the above referenced project. In the "Tribal Consultation Guidelines" issued by the Governor's Office of Planning and Research, early consultation with tribes is encouraged to acquire input on potential impacts.

The City of Bellflower is preparing a Negative Declaration, in accordance with the California Environmental Quality Act (CEQA) for a proposed 4,842-square foot office building and a 7,219-square foot service building with a 1,096-square foot mezzanine. A new trash enclosure and emergency backup generator are also proposed, along with other site improvements including property fences, landscaping, site lighting, drive-aisles and rework of the existing non-accessible curb ramp. The subject site is located at 10145 Artesia Place, within the M-1 (Light Industrial) District. Attached for your reference is a vicinity aerial photo illustrating the location of the subject site.

In accordance with the provisions of AB 52, please provide any input or desire for further consultation. Pursuant to PRC § 21080.3.1 (b), you have 30 days from the receipt of this letter to request consultation, in writing. We are respectfully requesting your input as soon as possible. If you have any cultural-related concerns, please address them to:

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Bellflower, CA 90706
(562) 804-1424, extension 2228
Email: rgenilo@bellflower.org

We appreciate your efforts regarding the proposed project.

Sincerely,

rgconcepcion

Rowena Genilo-Concepcion
Planning Manager

Attachment:
Vicinity Aerial Photo

The City of Bellflower
Families. Businesses. Futures.
16600 Civic Center Drive, Bellflower, CA 90706
Tel 562.804.1424 Fax 562.925.8660 www.bellflower.org

June 17, 2024

CERTIFIED MAIL RECEIPT / RETURN RECEIPT REQUESTED
9214 8901 9403 8364 5929 22
Email: GTTribalcouncil@aol.com

Gabrieleno/Tongva San Gabriel Band of Mission Indians
Chairperson Anthony Morales
P.O. Box 693
San Gabriel, CA, 91778

Re: Native American Tribal Consultation, Pursuant to the Assembly Bill 52 (AB 52), Amendments to the California Environmental Quality Act (CEQA) (Chapter 532, Statutes of 2014), Public Resources Code Sections 5097.94 (m), 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2 and 21084.3, Bellflower Somerset Mutual Water Company Office and Service Buildings Project at 10145 Artesia Place, Bellflower CA 90706

Dear Chairperson Anthony Morales:

In accordance with AB 52, the City of Bellflower is consulting with your tribal government to ensure the protection of California Native American Cultural Resources and involve your tribal government in the land use planning process for the above referenced project. In the "Tribal Consultation Guidelines" issued by the Governor's Office of Planning and Research, early consultation with tribes is encouraged to acquire input on potential impacts.

The City of Bellflower is preparing a Negative Declaration, in accordance with the California Environmental Quality Act (CEQA) for a proposed 4,842-square foot office building and a 7,219-square foot service building with a 1,096-square foot mezzanine. A new trash enclosure and emergency backup generator are also proposed, along with other site improvements including property fences, landscaping, site lighting, drive-aisles and rework of the existing non-accessible curb ramp. The subject site is located at 10145 Artesia Place, within the M-1 (Light Industrial) District. Attached for your reference is a vicinity aerial photo illustrating the location of the subject site.

In accordance with the provisions of AB 52, please provide any input or desire for further consultation. Pursuant to PRC § 21080.3.1 (b), you have 30 days from the receipt of this letter to request consultation, in writing. We are respectfully requesting your input as soon as possible. If you have any cultural-related concerns, please address them to:

City of Bellflower
Attention: Rowena Genilo-Concepcion
16600 Civic Center Drive
Bellflower, CA 90706
(562) 804-1424, extension 2228
Email: rgenilo@bellflower.org

We appreciate your efforts regarding the proposed project.

Sincerely,

rgconcepcion

Rowena Genilo-Concepcion
Planning Manager

Attachment:
Vicinity Aerial Photo

The City of Bellflower
Families. Businesses. Futures.
16600 Civic Center Drive, Bellflower, CA 90706
Tel 562.804.1424 Fax 562.925.8660 www.bellflower.org

June 17, 2024

CERTIFIED MAIL RECEIPT / RETURN RECEIPT REQUESTED
9214 8901 9403 8364 5930 66
Email: gtongva@gmail.com

Gabrielino Tongva Indians of California Tribal Council
Chairperson Robert Dorame
P.O. Box 490
Bellflower, CA, 90707

Re: Native American Tribal Consultation, Pursuant to the Assembly Bill 52 (AB 52), Amendments to the California Environmental Quality Act (CEQA) (Chapter 532, Statutes of 2014), Public Resources Code Sections 5097.94 (m), 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2 and 21084.3, Bellflower Somerset Mutual Water Company Office and Service Buildings Project at 10145 Artesia Place, Bellflower CA 90706

Dear Chairperson Robert Dorame:

In accordance with AB 52, the City of Bellflower is consulting with your tribal government to ensure the protection of California Native American Cultural Resources and involve your tribal government in the land use planning process for the above referenced project. In the "Tribal Consultation Guidelines" issued by the Governor's Office of Planning and Research, early consultation with tribes is encouraged to acquire input on potential impacts.

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City of Bellflower
Attention: Rowena Genilo-Concepcion
16600 Civic Center Drive
Bellflower, CA 90706
(562) 804-1424, extension 2228
Email: rgenilo@bellflower.org

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Sincerely,

rgconcepcion

Rowena Genilo-Concepcion
Planning Manager

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June 17, 2024

CERTIFIED MAIL RECEIPT / RETURN RECEIPT REQUESTED
9214 8901 9403 8364 5948 65
Email: christina.marsden@alumni.usc.edu

Gabrielino Tongva Indians of California Tribal Council
Cultural Resource Administrator Christina Conley
P.O. Box 941078
Simi Valley, CA, 93094

Re: Native American Tribal Consultation, Pursuant to the Assembly Bill 52 (AB 52), Amendments to the California Environmental Quality Act (CEQA) (Chapter 532, Statutes of 2014), Public Resources Code Sections 5097.94 (m), 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2 and 21084.3, Bellflower Somerset Mutual Water Company Office and Service Buildings Project at 10145 Artesia Place, Bellflower CA 90706

Dear Cultural Resource Administrator Christina Conley:

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City of Bellflower
Attention: Rowena Genilo-Concepcion
16600 Civic Center Drive
Bellflower, CA 90706
(562) 804-1424, extension 2228
Email: rgenilo@bellflower.org

We appreciate your efforts regarding the proposed project.

Sincerely,

rgconcepcion

Rowena Genilo-Concepcion
Planning Manager

Attachment:
Vicinity Aerial Photo

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Families. Businesses. Futures.
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June 17, 2024

CERTIFIED MAIL RECEIPT / RETURN RECEIPT REQUESTED
9214 8901 9403 8300 0064 5951 21
Email: sgoad@gabrielino-tongva.com

Gabrielino/Tongva Nation
Chairperson Sandonne Goad
106 1/2 Judge John Aiso St., #231
Los Angeles, CA, 90012

Re: Native American Tribal Consultation, Pursuant to the Assembly Bill 52 (AB 52), Amendments to the California Environmental Quality Act (CEQA) (Chapter 532, Statutes of 2014), Public Resources Code Sections 5097.94 (m), 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2 and 21084.3, Bellflower Somerset Mutual Water Company Office and Service Buildings Project at 10145 Artesia Place, Bellflower CA 90706

Dear Chairperson Sandonne Goad:

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City of Bellflower
Attention: Rowena Genilo-Concepcion
16600 Civic Center Drive
Bellflower, CA 90706
(562) 804-1424, extension 2228
Email: rgenilo@bellflower.org

We appreciate your efforts regarding the proposed project.

Sincerely,

rgconcepcion

Rowena Genilo-Concepcion
Planning Manager

Attachment:
Vicinity Aerial Photo

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Families. Businesses. Futures.
16600 Civic Center Drive, Bellflower, CA 90706
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June 17, 2024

CERTIFIED MAIL RECEIPT / RETURN RECEIPT REQUESTED
9214 8901 9403 8364 5952 68
Email: Chavez1956metro@gmail.com

Gabrielino-Tongva Tribe
Chairperson Charles Alvarez
23454 Vanowen Street
West Hills, CA, 91307

Re: Native American Tribal Consultation, Pursuant to the Assembly Bill 52 (AB 52), Amendments to the California Environmental Quality Act (CEQA) (Chapter 532, Statutes of 2014), Public Resources Code Sections 5097.94 (m), 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2 and 21084.3, Bellflower Somerset Mutual Water Company Office and Service Buildings Project at 10145 Artesia Place, Bellflower CA 90706

Dear Chairperson Charles Alvarez:

In accordance with AB 52, the City of Bellflower is consulting with your tribal government to ensure the protection of California Native American Cultural Resources and involve your tribal government in the land use planning process for the above referenced project. In the "Tribal Consultation Guidelines" issued by the Governor's Office of Planning and Research, early consultation with tribes is encouraged to acquire input on potential impacts.

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City of Bellflower
Attention: Rowena Genilo-Concepcion
16600 Civic Center Drive
Bellflower, CA 90706
(562) 804-1424, extension 2228
Email: rgenilo@bellflower.org

We appreciate your efforts regarding the proposed project.

Sincerely,

rgconcepcion

Rowena Genilo-Concepcion
Planning Manager

Attachment:
Vicinity Aerial Photo

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June 17, 2024

CERTIFIED MAIL RECEIPT / RETURN RECEIPT REQUESTED
9214 8901 9403 8364 5954 28
Email: tongvatcr@gmail.com

Gabrielino-Tongva Tribe
Cultural Resource Director Sam Dunlap
P.O. Box 3919
Seal Beach, CA, 90740

Re: Native American Tribal Consultation, Pursuant to the Assembly Bill 52 (AB 52), Amendments to the California Environmental Quality Act (CEQA) (Chapter 532, Statutes of 2014), Public Resources Code Sections 5097.94 (m), 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2 and 21084.3, Bellflower Somerset Mutual Water Company Office and Service Buildings Project at 10145 Artesia Place, Bellflower CA 90706

Dear Cultural Resource Director Sam Dunlap:

In accordance with AB 52, the City of Bellflower is consulting with your tribal government to ensure the protection of California Native American Cultural Resources and involve your tribal government in the land use planning process for the above referenced project. In the "Tribal Consultation Guidelines" issued by the Governor's Office of Planning and Research, early consultation with tribes is encouraged to acquire input on potential impacts.

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City of Bellflower
Attention: Rowena Genilo-Concepcion
16600 Civic Center Drive
Bellflower, CA 90706
(562) 804-1424, extension 2228
Email: rgenilo@bellflower.org

We appreciate your efforts regarding the proposed project.

Sincerely,

rgconcepcion

Rowena Genilo-Concepcion
Planning Manager

Attachment:
Vicinity Aerial Photo

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June 17, 2024

CERTIFIED MAIL RECEIPT / RETURN RECEIPT REQUESTED
9214 8901 9403 8364 5957 87
Email: kaamalam@gmail.com

Juaneno Band of Mission Indians Acjachemen Nation - Belardes
Cultural Resource Director Joyce Perry
4955 Paseo Segovia
Irvine, CA, 92603

Re: Native American Tribal Consultation, Pursuant to the Assembly Bill 52 (AB 52), Amendments to the California Environmental Quality Act (CEQA) (Chapter 532, Statutes of 2014), Public Resources Code Sections 5097.94 (m), 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2 and 21084.3, Bellflower Somerset Mutual Water Company Office and Service Buildings Project at 10145 Artesia Place, Bellflower CA 90706

Dear Cultural Resource Director Joyce Perry:

In accordance with AB 52, the City of Bellflower is consulting with your tribal government to ensure the protection of California Native American Cultural Resources and involve your tribal government in the land use planning process for the above referenced project. In the "Tribal Consultation Guidelines" issued by the Governor's Office of Planning and Research, early consultation with tribes is encouraged to acquire input on potential impacts.

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City of Bellflower
Attention: Rowena Genilo-Concepcion
16600 Civic Center Drive
Bellflower, CA 90706
(562) 804-1424, extension 2228
Email: rgenilo@bellflower.org

We appreciate your efforts regarding the proposed project.

Sincerely,

rgconcepcion

Rowena Genilo-Concepcion
Planning Manager

Attachment:
Vicinity Aerial Photo

The City of Bellflower
Families. Businesses. Futures.
16600 Civic Center Drive, Bellflower, CA 90706
Tel 562.804.1424 Fax 562.925.8660 www.bellflower.org

June 17, 2024

CERTIFIED MAIL RECEIPT / RETURN RECEIPT REQUESTED
9214 8901 9403 8364 5960 05
Email: jbmian.chairwoman@gmail.com

Juaneno Band of Mission Indians Acjachemen Nation 84A
Chairperson Heidi Lucero
31411-A La Matanza Street
San Juan Capistrano, CA, 92675

Re: Native American Tribal Consultation, Pursuant to the Assembly Bill 52 (AB 52), Amendments to the California Environmental Quality Act (CEQA) (Chapter 532, Statutes of 2014), Public Resources Code Sections 5097.94 (m), 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2 and 21084.3, Bellflower Somerset Mutual Water Company Office and Service Buildings Project at 10145 Artesia Place, Bellflower CA 90706

Dear Chairperson Heidi Lucero:

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City of Bellflower
Attention: Rowena Genilo-Concepcion
16600 Civic Center Drive
Bellflower, CA 90706
(562) 804-1424, extension 2228
Email: rgenilo@bellflower.org

We appreciate your efforts regarding the proposed project.

Sincerely,

rgconcepcion

Rowena Genilo-Concepcion
Planning Manager

Attachment:
Vicinity Aerial Photo

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Families. Businesses. Futures.
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Tel 562.804.1424 Fax 562.925.8660 www.bellflower.org

June 17, 2024

CERTIFIED MAIL RECEIPT / RETURN RECEIPT REQUESTED
9214 8901 9403 8364 5961 28
Email: sestrada@santarosa-nsn.gov

Santa Rosa Band of Cahuilla Indians
Tribal Chairman Steven Estrada
P.O. Box 391820
Anza, CA, 92539

Re: Native American Tribal Consultation, Pursuant to the Assembly Bill 52 (AB 52), Amendments to the California Environmental Quality Act (CEQA) (Chapter 532, Statutes of 2014), Public Resources Code Sections 5097.94 (m), 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2 and 21084.3, Bellflower Somerset Mutual Water Company Office and Service Buildings Project at 10145 Artesia Place, Bellflower CA 90706

Dear Tribal Chairman Steven Estrada:

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Bellflower, CA 90706
(562) 804-1424, extension 2228
Email: rgenilo@bellflower.org

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Sincerely,

rgconcepcion

Rowena Genilo-Concepcion
Planning Manager

Attachment:
Vicinity Aerial Photo

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June 17, 2024

CERTIFIED MAIL RECEIPT / RETURN RECEIPT REQUESTED
9214 8901 9403 8364 5963 19
Email: vminott@santarosa-nsn.gov

Santa Rosa Band of Cahuilla Indians
Tribal Administrator Vanessa Minott
P.O. Box 391820
Anza, CA, 92539

Re: Native American Tribal Consultation, Pursuant to the Assembly Bill 52 (AB 52), Amendments to the California Environmental Quality Act (CEQA) (Chapter 532, Statutes of 2014), Public Resources Code Sections 5097.94 (m), 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2 and 21084.3, Bellflower Somerset Mutual Water Company Office and Service Buildings Project at 10145 Artesia Place, Bellflower CA 90706

Dear Tribal Administrator Vanessa Minott:

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16600 Civic Center Drive
Bellflower, CA 90706
(562) 804-1424, extension 2228
Email: rgenilo@bellflower.org

We appreciate your efforts regarding the proposed project.

Sincerely,

rgconcepcion

Rowena Genilo-Concepcion
Planning Manager

Attachment:
Vicinity Aerial Photo

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June 17, 2024

CERTIFIED MAIL RECEIPT / RETURN RECEIPT REQUESTED
9214 8901 9403 8364 5966 09
Email: jontiveros@soboba-nsn.gov

Soboba Band of Luiseno Indians
Tribal Historic Preservation Officer Joseph Ontiveros
P.O. Box 487
San Jacinto, CA, 92581

Re: Native American Tribal Consultation, Pursuant to the Assembly Bill 52 (AB 52), Amendments to the California Environmental Quality Act (CEQA) (Chapter 532, Statutes of 2014), Public Resources Code Sections 5097.94 (m), 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2 and 21084.3, Bellflower Somerset Mutual Water Company Office and Service Buildings Project at 10145 Artesia Place, Bellflower CA 90706

Dear Tribal Historic Preservation Officer Joseph Ontiveros:

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16600 Civic Center Drive
Bellflower, CA 90706
(562) 804-1424, extension 2228
Email: rgenilo@bellflower.org

We appreciate your efforts regarding the proposed project.

Sincerely,

rgconcepcion

Rowena Genilo-Concepcion
Planning Manager

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June 17, 2024

CERTIFIED MAIL RECEIPT / RETURN RECEIPT REQUESTED
9214 8901 9403 8364 5990 51
Email: jvaldez@soboba-nsn.gov

Soboba Band of Luiseno Indians
Cultural Resource Specialist Jessica Valdez
P.O. Box 487
San Jacinto, CA, 92581

Re: Native American Tribal Consultation, Pursuant to the Assembly Bill 52 (AB 52), Amendments to the California Environmental Quality Act (CEQA) (Chapter 532, Statutes of 2014), Public Resources Code Sections 5097.94 (m), 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2 and 21084.3, Bellflower Somerset Mutual Water Company Office and Service Buildings Project at 10145 Artesia Place, Bellflower CA 90706

Dear Cultural Resource Specialist Jessica Valdez:

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City of Bellflower
Attention: Rowena Genilo-Concepcion
16600 Civic Center Drive
Bellflower, CA 90706
(562) 804-1424, extension 2228
Email: rgenilo@bellflower.org

We appreciate your efforts regarding the proposed project.

Sincerely,

rgconcepcion

Rowena Genilo-Concepcion
Planning Manager

Attachment:
Vicinity Aerial Photo

VICINITY AERIAL PHOTO
10145 Artesia Place, Bellflower CA 90706